ELECTRA

Service Manual

PXD Series R410A

Indoor Unit	Outdoor Unit
PXD9	ONG9 ST/RC
PXD12	ONG12 ST/RC
PXD15	ONG14 ST/RC
PXD18	GC18 ST/RC
PXD18	GC18 ST/RC 3PH
PXD24	OU7-24 ST/RC
PXD24	OU7-24T ST/RC
PXD30	OU8-30 ST/RC
PXD30	OU8-30T ST/RC

REFRIGERANT	
R410A	COOLING ONLY HEAT PUMP

SEPTEMBER - 2005

CONTENT

LIST OF EFFECTIVE PAGES

Note: Changes in the pages are indicated by a “Revision#” in the footer of each effected page (when none indicates no changes in the relevant page). All pages in the following list represent effected/ non effected pages divided by chapters.

Dates of issue for original and changed pages are:

Original ..... 0 ..... August 2005

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*Due to constant improvements please note that the data on this service manual can be modified with out notice.
**Photos are not contractual.

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1. INTRODUCTION

1.1 General

The PXD split floor and ceiling units range comprise the ST (cooling only) and RC (heat pump) models, as follows:

- **Cooling Only** PXD9ST, PXD12ST, PXD15ST, PXD18ST, PXD24ST, PXD30ST
- **Heat Pump** PXD9RC,PXD12RC,PXD15RC, PXD18RC, PXD24RC, PXD30RC

1.2 Main Features

The PXD series benefits from the most advanced technological innovations, namely :

- R410A
- Microprocessor control.
- Infrared remote control, and on unit.
- Possibility for treated air distribution to adjacent room (Accessory kit).
- High COP.
- Easy access to the interconnecting tubing and wiring connections.
- Possibility to connect a condensate pump kit with an integral over flow protection (Accessory kit).
- Automatic treated air sweep (horizontal and vertical)
- Low indoor and outdoor noise levels.
- Easy installation and service.

1.3 Indoor Unit

The indoor unit can be mounted as floor or celling type, no special adjustment are needed. it can be easily fitted to many types of residential and commercials applications.

It includes:

- Casing with inlet and outlet grilles.
- Motorized flaps (Horizontal and vertical).
- Advanced electronic control box assembly (storm 10V7).
- Coated indoor coil.
- Mounting plate

1.4 Filtration

The PXD series presents several types of air filters:

- Easily accessible, and re-usable pre-filters (mesh)
- Active carbon filter.

1.5 Control

The microprocessor indoor controller, and an infrared remote control, supplied as standard, provide complete operating function and programming. The unit is designed with an on unit control board as well.
For further details please refer to the Operation Manual, Appendix A.

1.6 Outdoor Unit

The PXD outdoor units can be installed as floor or wall mounted by using a wall supporting bracket. The metal sheets are protected by anti- corrosion paint work allowing long life resistance. All outdoor units are pre-charged. For further information please refer to the Product Data Sheet, Chapter 2.

It includes :

- A **Rotary** Compressor mounted in a soundproofed compartment.
- Axial fan.
- Outdoor coil with hydrophilic louver fins for RC units.
- Outlet air fan grill.
- Service valves" flare" type connection.
- Interconnecting wiring terminal block.

1.7 Tubing Connections

Flare type interconnecting tubing to be produced on site.
For further details please refer to the Installation Manual, Appendix A

1.8 Accessories

ASK (All Season Kit):

For low ambient working conditions in cooling, an ASK can be installed inside the outdoor unit. This kit allows cooling operation down to outdoor temp of -10 ºC by gradually controlling the outdoor fan speed motor.

RCW Wall Mounted Remote Control

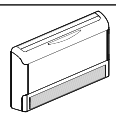
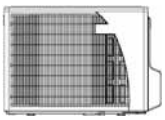
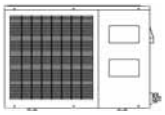
The RCW remote control is mounted on the wall, and controls the unit either as an infrared remote control or as a wired controller. The wired controller can control up to 10 Indoor units with the same program settings and adjustments.
For further details please refer to Optional Accessories, Chapter on this manual.

1.9 Inbox Documentation

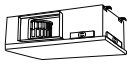
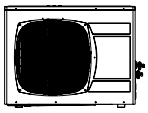
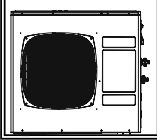
Each unit is supplied with its own installation and operation manuals.

1.10 Matching Table

1.10.1 R410A

OUTDOOR UNITS			INDOOR UNITS											
														
	MODEL	REF'	K9	K11	K15	K18	WNG9	WNG12	WNG14	WNG18	PXD9	PXD12	PXD15	PXD18
	ONG9 ST	R410A	√				√				√			
	ONG12 ST	R410A		√				√				√		
	ONG14 ST	R410A			√				√				√	
	ONG9 RC	R410A	√				√				√			
	ONG12 RC	R410A		√				√				√		
	ONG14 RC	R410A			√				√*				√	
	GC18 ST	R410A				√				√				√
	GC18 RC	R410A				√				√				√

√* - the outdoor unit of this combination cannot be matched to other indoor units.

OUTDOOR UNITS			INDOOR UNITS							
										
	MODEL	REF'	KN24	KN30	WNG24	WNG30	PXD24	PXD30	DNG24	DNG30
	OU724ST	R410A	√		√		√		√	
	OU724T ST	R410A	√		√		√		√	
	OU724 RC	R410A	√		√*		√		√	
	OU724T RC	R410A	√		√*		√		√	
	OU830 ST	R410A		√		√		√		√
	OU830T ST	R410A		√		√		√		√
	OU830 RC	R410A		√		√		√		√
	OU830T RC	R410A		√		√		√		√

√* - the outdoor unit of this combination cannot be matched to other indoor units.

The above tables lists outdoor units and PXD indoor units, which can be matched together. In addition the listed outdoor units can be matched with other types of indoor units such as Ducted,Wall Mounted, and Cassettes .

For further information please refer to the relevant Service Manual.

2. PRODUCT DATA SHEET

2.1 R410A

Model Indoor Unit				**PXD-9**		
Model Outdoor Unit				**ONG-9**		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	9080	9080	9520
			kW	2.66	2.66	2.79
Power input (1)			kW	0.825	0.825	0.86
EER (Cooling) or COP(Heating) (1)			W/W	3.22	3.22	3.24
Energy efficiency class				A	A	C
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	3.7	3.7	4.0
Starting current			A	18.7		
Circuit breaker rating			A	10		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	740/650/600		
	Air flow (2)	H/M/L	m3/hr	370/330/290		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	50/49/47		
	Sound pressure level(4)	H/M/L	dB(A)	39/37/35		
	Moisture removal		l/hr	1.1		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	820x630x190		
	Weight		kg	21		
	Package dimensions	WxHxD	mm	890x710x280		
	Packaged weight		kg	25		
	Units per pallet		units	14		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube		
	Compressor type, model			Rotary,LG GK113PAG		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	780		
	Air flow	H/L	m3/hr	1780		
	Sound power level	H/L	dB(A)	58	60	
	Sound pressure level(4)	H/L	dB(A)	48	49	
	Dimensions	WxHxD	mm	795x610x290		
	Weight		kg	34	35	
	Package dimensions	WxHxD	mm	945x655x395		
	Packaged weight		kg	38	39	
	Units per pallet		Units	9		
	Stacking height		units	3 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	1kg/7.5m		
	Additional charge per 1 meter		g/m	7.5m<Lin<15m:+10g/m		
	Connections between units	Liquid line	In.(mm)	1/4"(6.35)		
		Suction line	In.(mm)	3/8"(9.53)		
		Max. tubing length	m.	Max.15		
		Max. height difference	m.	Max.7		
Operation control type				Remote control		
Heating elements			kW			
Others						

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				**PXD-12**		
Model Outdoor Unit				**ONG-12**		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	12010	12010	12620
			kW	3.52	3.52	3.7
Power input (1)			kW	1.155	1.155	1.15
EER (Cooling) or COP(Heating) (1)			W/W	3.05	3.05	3.22
Energy efficiency class				B	B	C
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	5.2	5.2	5.2
Starting current			A	24		
Circuit breaker rating			A	15		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	830/770/710		
	Air flow (2)	H/M/L	m3/hr	420/390/350		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	56/53/51		
	Sound pressure level(4)	H/M/L	dB(A)	45/41/38		
	Moisture removal		l/hr	1.5		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	820x630 x190		
	Weight		kg	22		
	Package dimensions	WxHxD	mm	890x710x280		
	Packaged weight		kg	26		
	Units per pallet		units	14		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube		
	Compressor type, model			Rotary, Toshiba PA145X2C-4FT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	810		
	Air flow	H/L	m3/hr	1850		
	Sound power level	H/L	dB(A)	62	64	
	Sound pressure level(4)	H/L	dB(A)	52	53	
	Dimensions	WxHxD	mm	795x610x290		
	Weight		kg	35	36	
	Package dimensions	WxHxD	mm	945x655x395		
	Packaged weight		kg	39	40	
	Units per pallet		Units	9		
	Stacking height		units	3 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	1.23kg/7.5m	1.27kg/7.5m	
	Additional charge per 1 meter		g/m	7.5m<Lin<15m:+15g/m		
	Connections between units	Liquid line	In.(mm)	1/4"(6.35)		
		Suction line	In.(mm)	3/8"(9.53)		
		Max. tubing length	m.	Max.15		
		Max. height difference	m.	Max.7		
Operation control type				Remote control		
Heating elements			kW			
Others						

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				PXD-15		
Model Outdoor Unit				ONG-14		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	13990	13990	15350
			kW	4.1	4.1	4.5
Power input (1)			kW	1.355	1.355	1.380
EER (Cooling) or COP(Heating) (1)			W/W	3.03	3.03	3.26
Energy efficiency class				B	B	C
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	6.4	6.4	6.5
Starting current			A	30		
Circuit breaker rating			A	15		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1000/780/720		
	Air flow (2)	H/M/L	m3/hr	510/390/350		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	57/53/49		
	Sound pressure level(4)	H/M/L	dB(A)	48/43/38		
	Moisture removal		l/hr	1.9		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	820x630 x190		
	Weight		kg	22		
	Package dimensions	WxHxD	mm	890x710x280		
	Packaged weight		kg	26		
	Units per pallet		units	14		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube		
	Compressor type, model			Rotary, MITSUBISHI RN165VHSMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	920		
	Air flow	H/L	m3/hr	2160		
	Sound power level	H/L	dB(A)	63	64	
	Sound pressure level(4)	H/L	dB(A)	53	54	
	Dimensions	WxHxD	mm	795x610x290		
	Weight		kg	4105	42.2	
	Package dimensions	WxHxD	mm	945x655x395		
	Packaged weight		kg	45.5	46.5	
	Units per pallet		Units	9		
	Stacking height		units	3 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	1.34kg/7.5m		
	Additional charge per 1 meter		g/m	7.5m<Lin<15m:+25g/m		
	Connections between units	Liquid line	In.(mm)	1/4"(6.35)		
		Suction line	In.(mm)	1/2"(12.7)		
		Max. tubing length	m.	Max.15		
		Max. height difference	m.	Max.7		
Operation control type				Remote control		
Heating elements			kW			
Others						

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				**PXD-18**		
Model Outdoor Unit				**GC-18**		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	18770	18770	19620
			kW	5.5	5.5	5.75
Power input (1)			kW	1.82	1.82	1.77
EER (Cooling) or COP(Heating) (1)			W/W	3.02	3.02	3.25
Energy efficiency class				B	B	C
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	8.2	8.2	7.9
Starting current			A	43		
Circuit breaker rating			A	15		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1100/1000/900		
	Air flow (2)	H/M/L	m3/hr	930/820/700		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	65/60/56		
	Sound pressure level(4)	H/M/L	dB(A)	51/48/45		
	Moisture removal		l/hr	1.9		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	30		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	35		
	Units per pallet		units	7		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube		
	Compressor type, model			Rotary,LG GJ208PAA		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	815		
	Air flow	H/L	m3/hr	2480		
	Sound power level	H/L	dB(A)	68		
	Sound pressure level(4)	H/L	dB(A)	58		
	Dimensions	WxHxD	mm	846x690x302		
	Weight		kg	56		
	Package dimensions	WxHxD	mm	990x470x430		
	Packaged weight		kg	60	61	
	Units per pallet		Units	9		
	Stacking height		units	3 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	1.6kg/7.5m		
	Additional charge per 1 meter		g/m	7.5m<Lin<25m:+25g/m		
	Connections between units	Liquid line	In.(mm)	1/4"(6.35)		
		Suction line	In.(mm)	1/2"(12.7)		
		Max. tubing length	m.	Max.25		
		Max. height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others						

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(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				PXD-18		
Model Outdoor Unit				GC-18 3PH		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	18760	18760	19600
			kW	5.5	5.5	5.75
Power input (1)			kW	1.77	1.77	1.69
EER (Cooling) or COP(Heating) (1)			W/W	3.12	3.12	3.41
Energy efficiency class				B	B	B
Power supply			V/Ph/Hz	380/3/50Hz		
Rated current			A	3.1	3.1	3
Starting current			A	26		
Circuit breaker rating			A	15		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1100/1000/900		
	Air flow (2)	H/M/L	m3/hr	930/820/700		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	65/60/56		
	Sound pressure level(4)	H/M/L	dB(A)	51/48/45		
	Moisture removal		l/hr	1.9		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	30		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	35		
	Units per pallet		units	7		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube		
	Compressor type, model			Rotary ,Mitsubishi NN21YDAMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	815		
	Air flow	H/L	m3/hr	2480		
	Sound power level	H/L	dB(A)	68		
	Sound pressure level(4)	H/L	dB(A)	58		
	Dimensions	WxHxD	mm	846x690x302		
	Weight		kg	56		
	Package dimensions	WxHxD	mm	990x770x430		
	Packaged weight		kg	60	61	
	Units per pallet		Units	9		
	Stacking height		units	3 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	1.89kg/7.5m		
	Additional charge per 1 meter		g/m	4m≤Length≤10m +0g 10m≤Length≤18m +240g 18m≤Length≤25m +560g		
	Connections between units	Liquid line	In.(mm)	1/4"(6.35)		
		Suction line	In.(mm)	1/2"(12.7)		
		Max .tubing length	m.	Max.25		
		Max. height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others				All Season kit factory option		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				**PXD-24**		
Model Outdoor Unit				**OU7-24**		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	23300	23300	24000
			kW	6.83	6.83	7.03
Power input (1)			kW	2.27	2.27	2.13
EER (Cooling) or COP(Heating) (1)			W/W	3.01	3.01	3.03
Energy efficiency class				B	B	C
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	9.7	9.7	8.4
Starting current			A	63		
Circuit breaker rating			A	20		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1200/980/840		
	Air flow (2)	H/M/L	m3/hr	1000/900/780		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	64/62/59		
	Sound pressure level(4)	H/M/L	dB(A)	53/51/48		
	Moisture removal		l/hr	2.7		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	33		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	38		
	Units per pallet		units	7		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube +Restrictor		
	Compressor type ,model			Rotary, Mitsubishi NN27VBAMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	850		
	Air flow	H/L	m3/hr	3100		
	Sound power level	H/L	dB(A)	67		
	Sound pressure level(4)	H/L	dB(A)	58		
	Dimensions	WxHxD	mm	900x680x340		
	Weight		kg	74		
	Package dimensions	WxHxD	mm	985x730x406		
	Packaged weight		kg	77		
	Units per pallet		Units	6		
	Stacking height		units	2 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	2.16kg/12.5m		
	Additional charge per 1 meter		g/m	12.5m<Add 430g<25m 25m<Add 530g<30m		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max .tubing length	m.	Max.30		
		Max .height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others				All Season kit factory option		

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(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				PXD-24		
Model Outdoor Unit				OU7-24T		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	23300	23300	24000
			kW	6.83	6.83	7.03
Power input (1)			kW	2.27	2.27	2.13
EER (Cooling) or COP(Heating) (1)			W/W	3.01	3.01	3.03
Energy efficiency class				B	B	C
Power supply			V/Ph/Hz	400/3/50		
Rated current			A	3x7	3x7	3x7
Starting current			A	55		
Circuit breaker rating			A	3x16		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1200/980/840		
	Air flow (2)	H/M/L	m3/hr	1000/900/780		
	External static pressure	Min-Max	Pa	0		
	Sound power level (3)	H/M/L	dB(A)	64/62/59		
	Sound pressure level(4)	H/M/L	dB(A)	53/51/48		
	Moisture removal		l/hr	2.7		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	33		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	38		
	Units per pallet		units	7		
	Stacking height		units	7 levels		
OUTDOOR	Refrigerant control			Capillary tube +Restrictor		
	Compressor type ,model			Rotary, Mitsubishi NN27VBAMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	850		
	Air flow	H/L	m3/hr	3100		
	Sound power level	H/L	dB(A)	67		
	Sound pressure level(4)	H/L	dB(A)	58		
	Dimensions	WxHxD	mm	900x680x340		
	Weight		kg	74		
	Package dimensions	WxHxD	mm	985x730x406		
	Packaged weight		kg	77		
	Units per pallet		Units	6		
	Stacking height		units	2 levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	2.16kg/12.5m		
	Additional charge per 1 meter		g/m	12.5m<Add 430g<25m 25m<Add 530g<30m		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max .tubing length	m.	Max.30		
		Max .height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others				All Season kit factory option		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				**PXD-30**		
Model Outdoor Unit				**OU830**		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	29,100	29,100	29,500
			kW	8.52	8.52	8.65
Power input (1)			kW	2.99	2.99	2.79
EER (Cooling) or COP(Heating) (1)			W/W	2.85	2.85	3.10
Energy efficiency class				C	C	D
Power supply			V/Ph/Hz	220-240V/Single/50Hz		
Rated current			A	12.2	12.2	11.3
Starting current			A	80		
Circuit breaker rating			A	25		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1360/1200/1010		
	Air flow (2)	H/M/L	m3/hr	1020/895/700		
	External static pressure	Min-Max	Pa	N/A		
	Sound power level (3)	H/M/L	dB(A)	68/64/60		
	Sound pressure level(4)	H/M/L	dB(A)	56/53/49		
	Moisture removal		l/hr	3.4		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	32		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	36		
	Units per pallet		units	7		
	Stacking height		units	7 Levels		
OUTDOOR	Refrigerant control			Capillary		
	Compressor type, model			Rotary, Mitsubishi NN33VAAMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	850		
	Air flow	H/L	m3/hr	3150		
	Sound power level	H/L	dB(A)	69		
	Sound pressure level(4)	H/L	dB(A)	59		
	Dimensions	WxHxD	mm	900x860x340		
	Weight		kg	78		
	Package dimensions	WxHxD	mm	985x907x435		
	Packaged weight		kg	82		
	Units per pallet		Units	6		
	Stacking height		units	2 Levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	2.42kg/15m		
	Additional charge per 1 meter		g/m	30		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max .tubing length	m.	Max.30		
		Max .height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others				Crankcase heater (50W)		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

Model Indoor Unit				PXD-30		
Model Outdoor Unit				OU830T		
Installation Method of Pipe				Flared		
Characteristics			**Units**	**Cooling Only**	**Cooling**	**Heating**
Capacity (1)			Btu/hr	28300	28300	28,300
			kW	8.30	8.30	8.30
Power input (1)			kW	2.77	2.77	2.63
EER (Cooling) or COP(Heating) (1)			W/W	3.00	3.00	3.15
Energy efficiency class				C	C	D
Power supply			V/Ph/Hz	400V/3/50		
Rated current			A	3x5.2	3x5.2	3x5.1
Starting current			A	35		
Circuit breaker rating			A	3x16		
INDOOR	Fan type & quantity			Centrifugal x 2		
	Fan speeds	H/M/L	RPM	1360/1200/1010		
	Air flow (2)	H/M/L	m3/hr	1020/895/700		
	External static pressure	Min-Max	Pa	N/A		
	Sound power level (3)	H/M/L	dB(A)	68/64/60		
	Sound pressure level(4)	H/M/L	dB(A)	56/53/49		
	Moisture removal		l/hr	3.4		
	Condensate drain tube I.D		mm	16		
	Dimensions	WxHxD	mm	1200x630x190		
	Weight		kg	32		
	Package dimensions	WxHxD	mm	1270x710x280		
	Packaged weight		kg	36		
	Units per pallet		units	7		
	Stacking height		units	7 Levels		
OUTDOOR	Refrigerant control			Capillary		
	Compressor type, model			Rotary, Mitsubishi NN33VAAMT		
	Fan type & quantity			Propeller(direct) x 1		
	Fan speeds	H/L	RPM	850		
	Air flow	H/L	m3/hr	3150		
	Sound power level	H/L	dB(A)	69		
	Sound pressure level(4)	H/L	dB(A)	59		
	Dimensions	WxHxD	mm	900x860x340		
	Weight		kg	78		
	Package dimensions	WxHxD	mm	985x907x435		
	Packaged weight		kg	82		
	Units per pallet		Units	6		
	Stacking height		units	2 Levels		
	Refrigerant type			R410A		
	Refrigerant chargless distance		kg/m	2.42kg/15m		
	Additional charge per 1 meter		g/m	30		
	Connections between units	Liquid line	In.(mm)	3/8"(9.53)		
		Suction line	In.(mm)	5/8"(15.88)		
		Max .tubing length	m.	Max.30		
		Max .height difference	m.	Max.15		
Operation control type				Remote control		
Heating elements			kW			
Others				Crankcase heater (50W)		

(1) Rating conditions in accordance with ISO 5151 and ISO 13253 (for ducted units) and EN 14511.
(2) Airflow in ducted units; at nominal external static pressure.
(3) Sound power in ducted units is measured at air discharge.
(4) Sound pressure level measured at 1 meter distance from unit.

3. RATING CONDITIONS

Standard conditions in accordance with ISO 5151, ISO 13253 (for ducted units) and EN 14511.

Cooling:
Indoor: 27°C DB 19°C WB
Outdoor: 35 °C DB

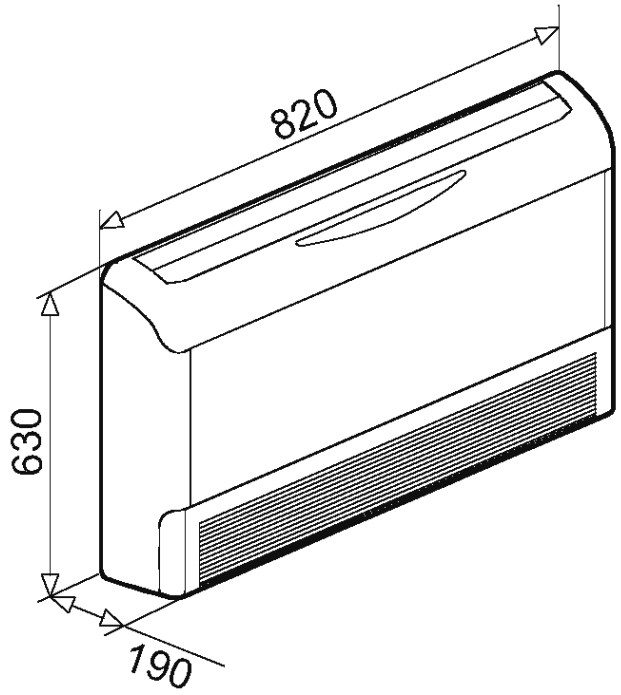
Heating:
Indoor: 20°C DB
Outdoor: 7°C DB 6°C WB

3.1 Operating Limits R410A

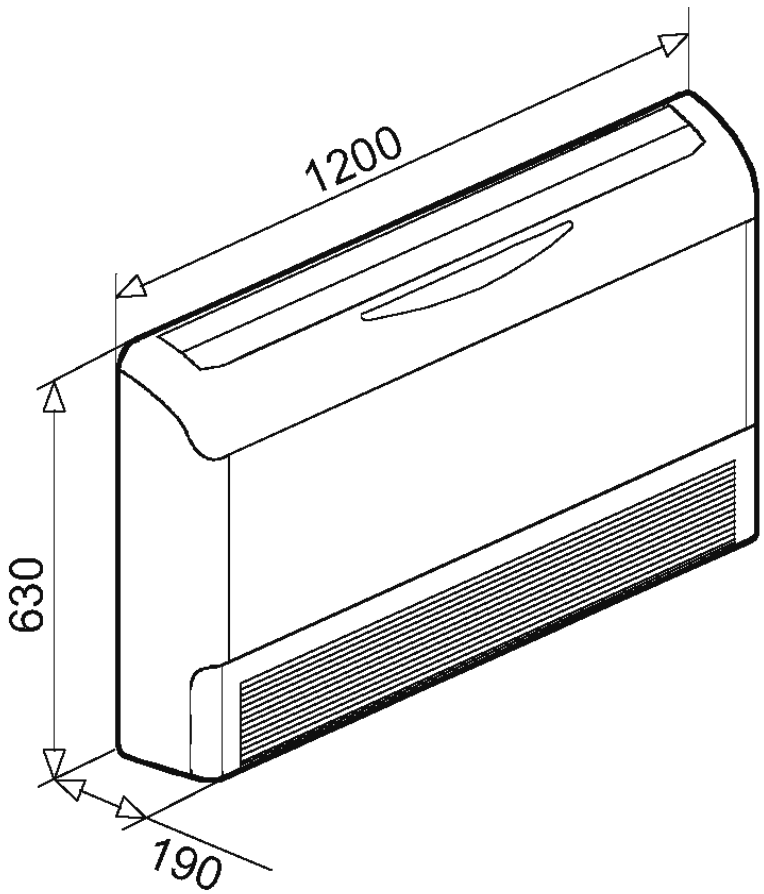
		Indoor	Outdoor
Cooling	Upper limit	32°C DB 23°C WB	46°C DB
	Lower limit	21°C DB 15°C WB	21°C DB
Heating	Upper limit	27°C DB	24°C DB 18°C WB
	Lower limit	20°C DB	-9°C DB -10°C WB
Voltage	1PH	198 – 242 V	
	3PH	360 – 440 V	

4. OUTLINE DIMENSIONS

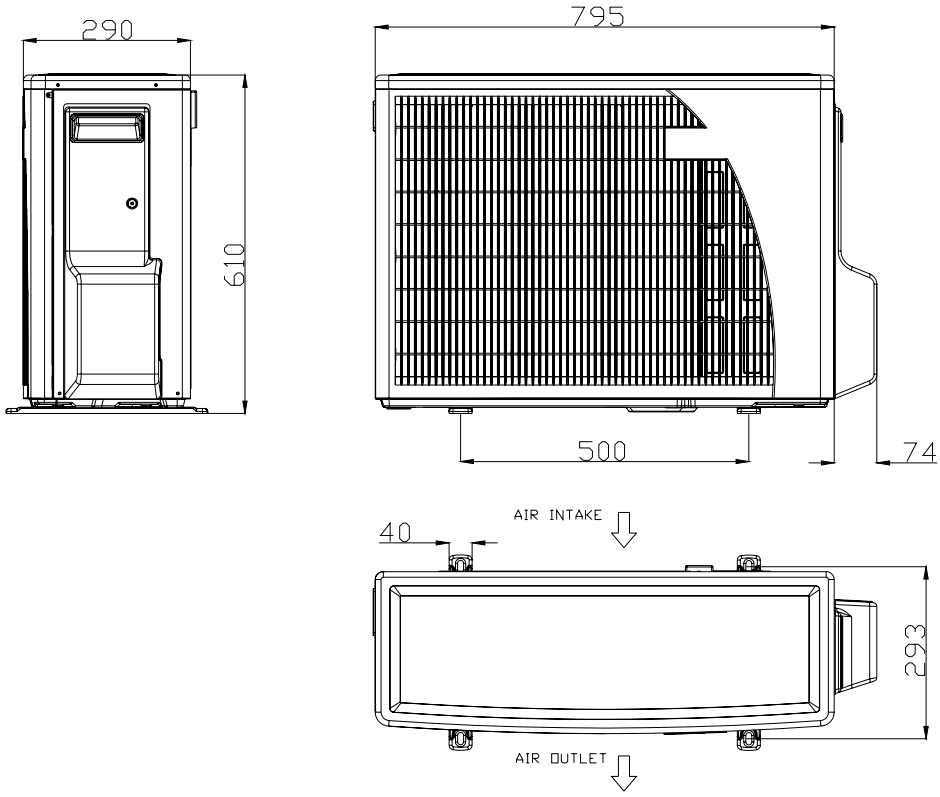
4.1 Indoor Unit : PXD 9, 12, 15 R410A



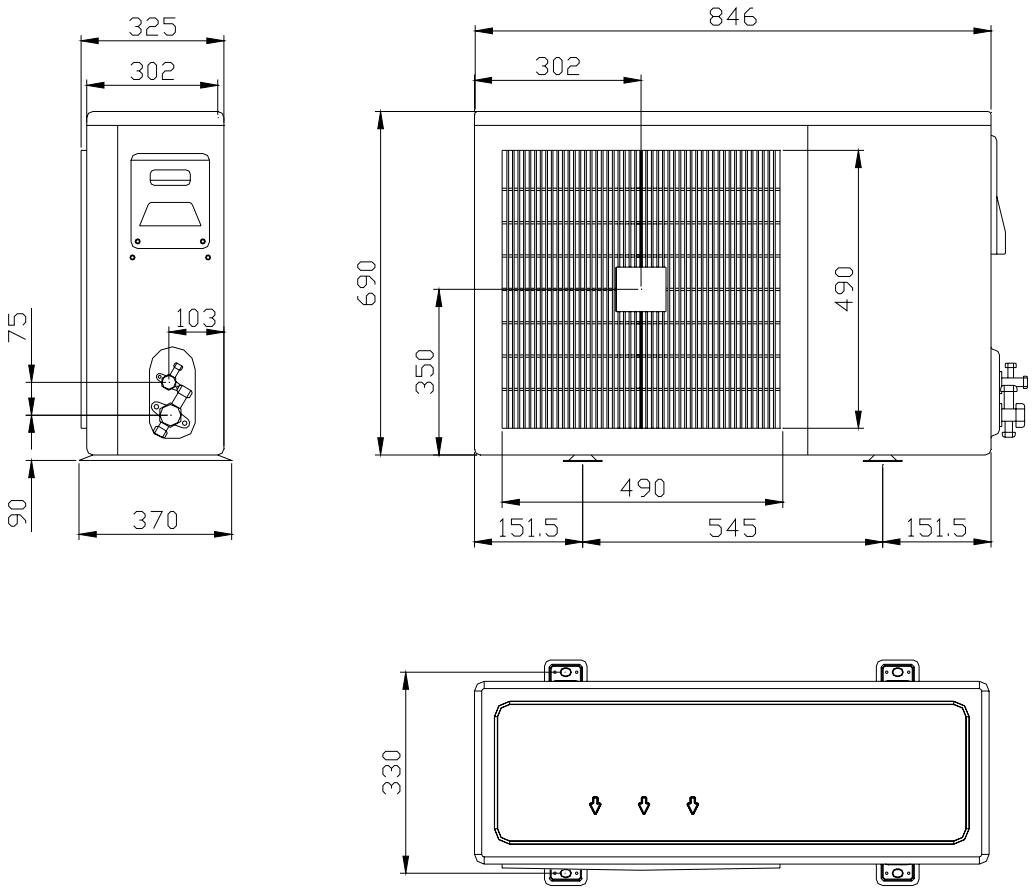
4.2 Indoor Unit : PXD 18, 24, 30 R410A



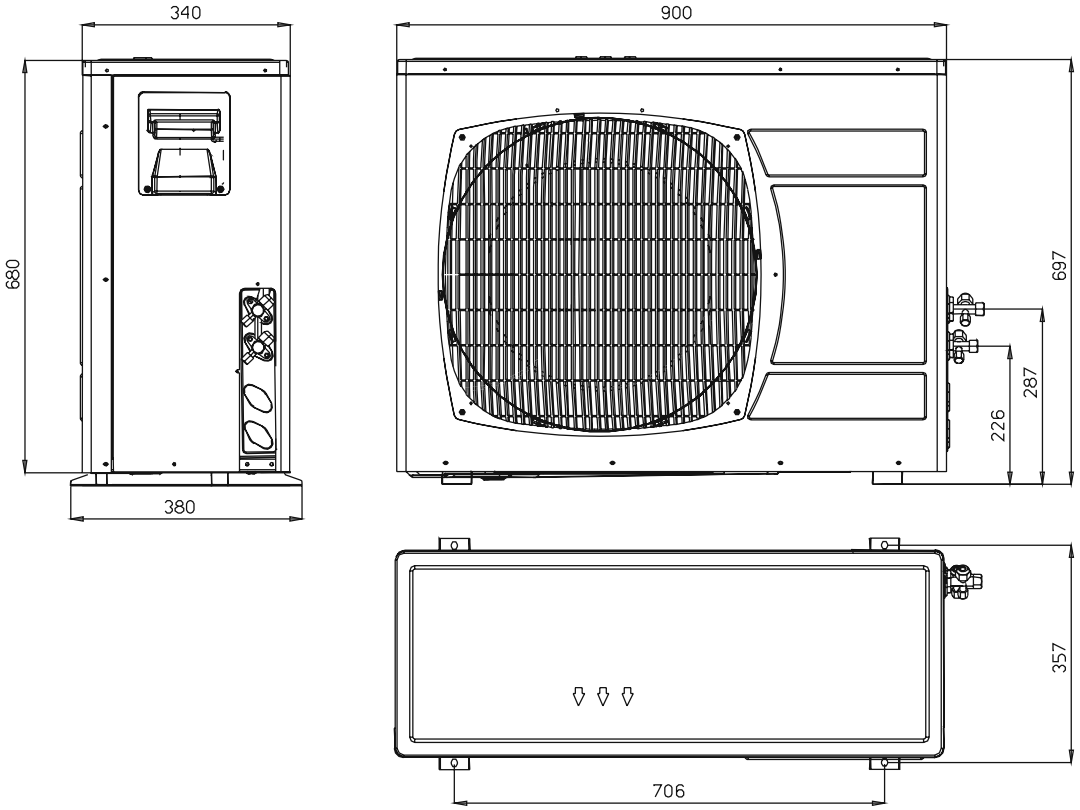
4.3 Outdoor Unit : ONG 9, 12, 14



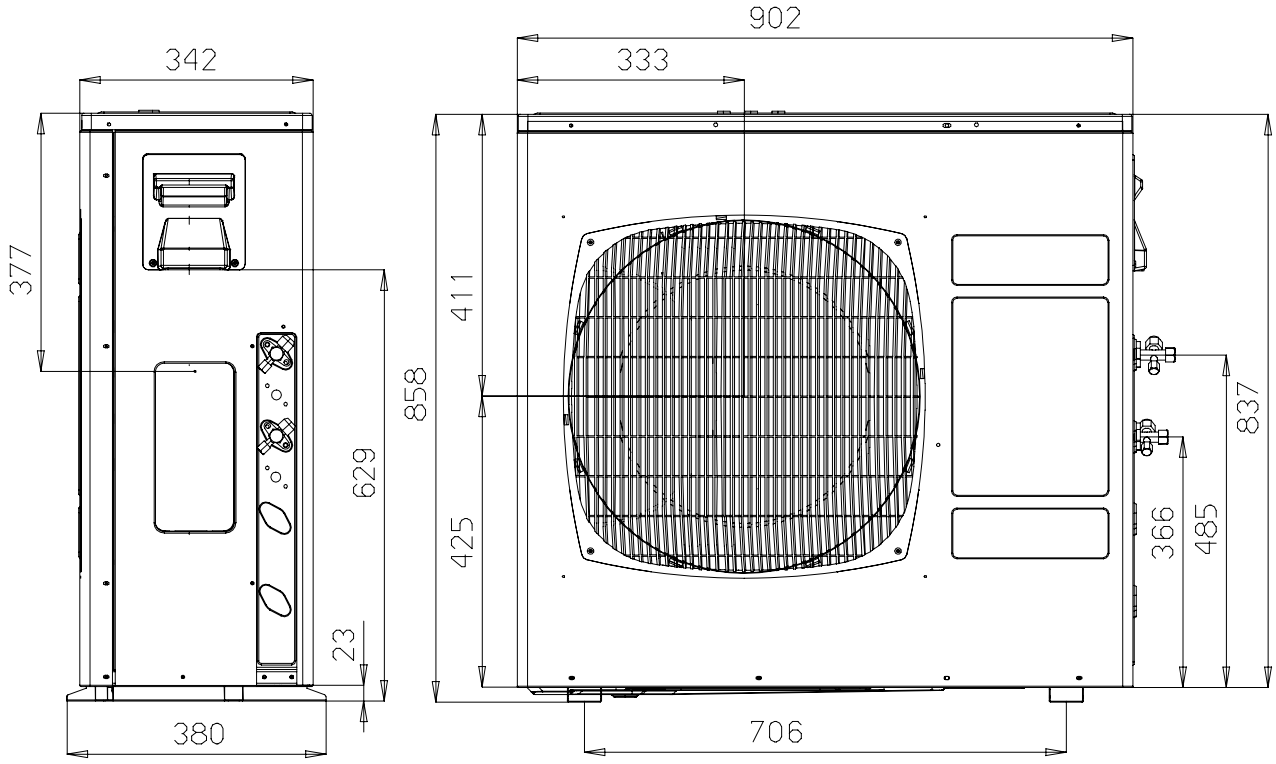
4.4 Outdoor Unit : GC 18



4.5 Outdoor Unit : OU7-24



4.6 Outdoor Unit : OU8-30



5. PERFORMANCE DATA

5.1 PXD9 ONG9 R410A

5.1.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	2.80	2.90	2.97	3.04	3.09
	SC	1.85	1.93	2.01	2.06	2.09
	PI	0.59	0.59	0.59	0.59	0.60
20(1)	TC	2.71	2.86	2.95	3.02	3.07
	SC	1.81	1.91	1.99	2.05	2.09
	PI	0.64	0.64	0.64	0.65	0.65
25	TC	2.57	2.77	2.91	3.00	3.07
	SC	1.77	1.88	1.98	2.03	2.07
	PI	0.69	0.70	0.70	0.70	0.71
30	TC	2.40	2.61	2.82	2.92	3.01
	SC	1.71	1.82	1.93	1.99	2.03
	PI	0.74	0.76	0.76	0.77	0.78
35	TC	2.22	2.41	2.66	2.79	2.93
	SC	1.63	1.75	1.89	1.94	1.98
	PI	0.80	0.82	0.83	0.84	0.84
40	TC	2.02	2.20	2.40	2.62	2.76
	SC	1.53	1.65	1.79	1.84	1.88
	PI	0.87	0.88	0.89	0.91	0.91
46	TC	1.75	1.92	2.11	2.33	2.51
	SC	1.41	1.51	1.63	1.69	1.72
	PI	0.95	0.96	0.98	1.00	1.01

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.1.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	1.46	0.69	1.41	0.73	1.35	0.77
-7	1.58	0.71	1.52	0.74	1.46	0.78
-2	1.67	0.71	1.62	0.76	1.56	0.80
2	2.04	0.75	1.95	0.80	1.87	0.84
6	2.87	0.80	**2.79**	**0.86**	2.69	0.91
10	3.12	0.85	3.04	0.91	2.96	0.97
15	3.38	0.89	3.29	0.95	3.21	1.01
20	3.56	0.91	3.47	0.99	3.38	1.07

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.2 Capacity Correction Factor Due to Tubing Length

5.2.1 Cooling

TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.961	0.950	---	---	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

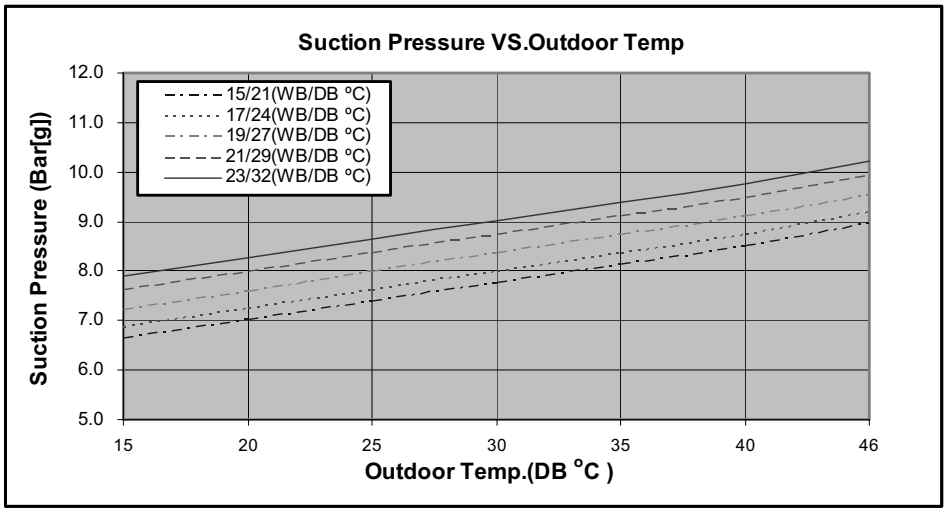
5.2.2 Heating

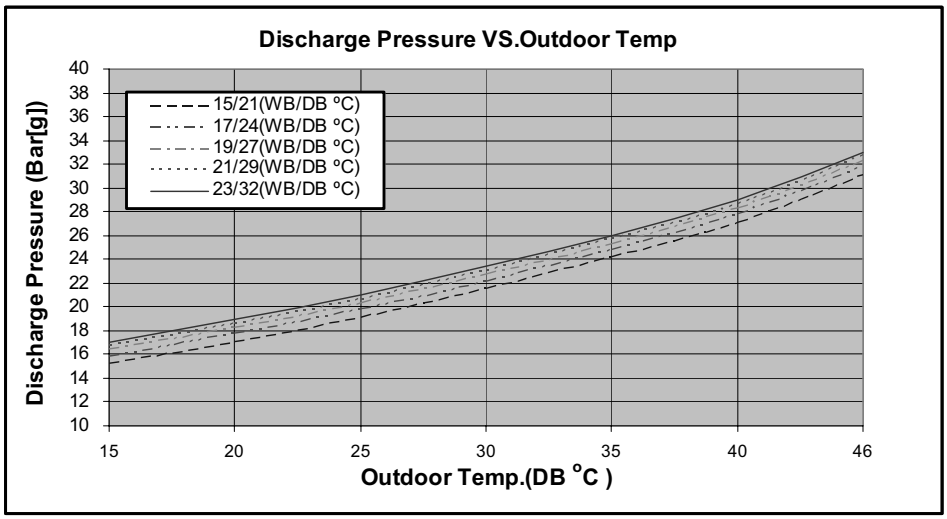
TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.04	**1**	0.975	0.961	---	---	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

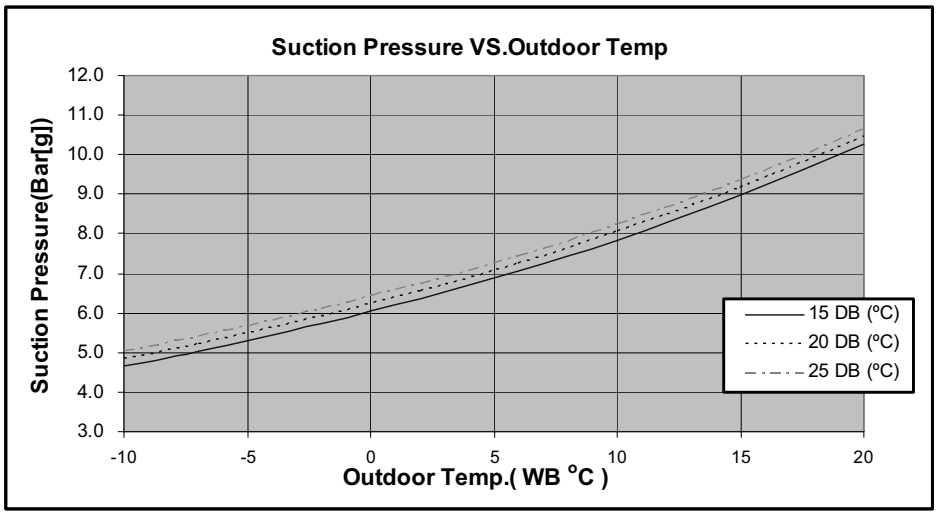
5.3 Pressure Curves.

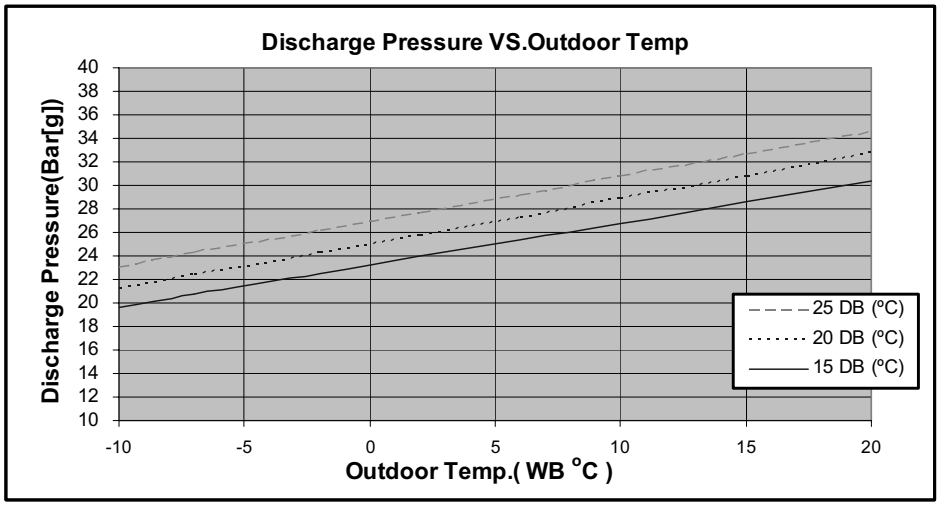
5.3.1 Cooling.





5.3.2 Heating.


Suction Pressure VS.Outdoor Temp
Suction Pressure(Bar[g])
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
15 DB (ºC)
20 DB (ºC)
25 DB (ºC)


Discharge Pressure VS.Outdoor Temp
Discharge Pressure(Bar[g])
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
25 DB (ºC)
20 DB (ºC)
15 DB (ºC)

5.4 PXD12 ONG12 R410A

5.4.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	3.71	3.84	3.93	4.03	4.09
	SC	2.40	2.50	2.60	2.66	2.71
	PI	0.82	0.82	0.83	0.83	0.83
20(1)	TC	3.59	3.78	3.90	4.00	4.06
	SC	2.35	2.48	2.58	2.66	2.71
	PI	0.89	0.90	0.90	0.90	0.91
25	TC	3.40	3.67	3.86	3.97	4.07
	SC	2.29	2.43	2.56	2.64	2.69
	PI	0.96	0.97	0.98	0.98	0.99
30	TC	3.18	3.46	3.74	3.87	3.98
	SC	2.22	2.36	2.51	2.58	2.63
	PI	1.04	1.06	1.07	1.07	1.08
35	TC	2.94	3.19	3.52	3.70	3.87
	SC	2.11	2.26	2.45	2.52	2.57
	PI	1.12	1.14	1.16	1.17	1.18
40	TC	2.67	2.91	3.18	3.47	3.65
	SC	1.99	2.14	2.32	2.39	2.44
	PI	1.21	1.23	1.25	1.27	1.28
46	TC	2.32	2.54	2.79	3.08	3.32
	SC	1.83	1.96	2.11	2.19	2.24
	PI	1.32	1.34	1.37	1.39	1.41

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.4.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	1.94	0.92	1.87	0.98	1.79	1.03
-7	2.09	0.94	2.02	0.99	1.94	1.05
-2	2.22	0.95	2.15	1.01	2.07	1.07
2	2.70	1.00	2.59	1.06	2.48	1.13
6	3.81	1.08	**3.70**	**1.15**	3.57	1.22
10	4.14	1.14	4.03	1.21	3.92	1.30
15	4.48	1.18	4.37	1.28	4.26	1.36
20	4.72	1.22	4.61	1.32	4.48	1.43

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.5 Capacity Correction Factor Due to Tubing Length

5.5.1 Cooling

TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.03	**1**	0.961	0.948	—	—	—	—	—

* Minimum recommended tubing length between indoor and outdoor units is 3m.

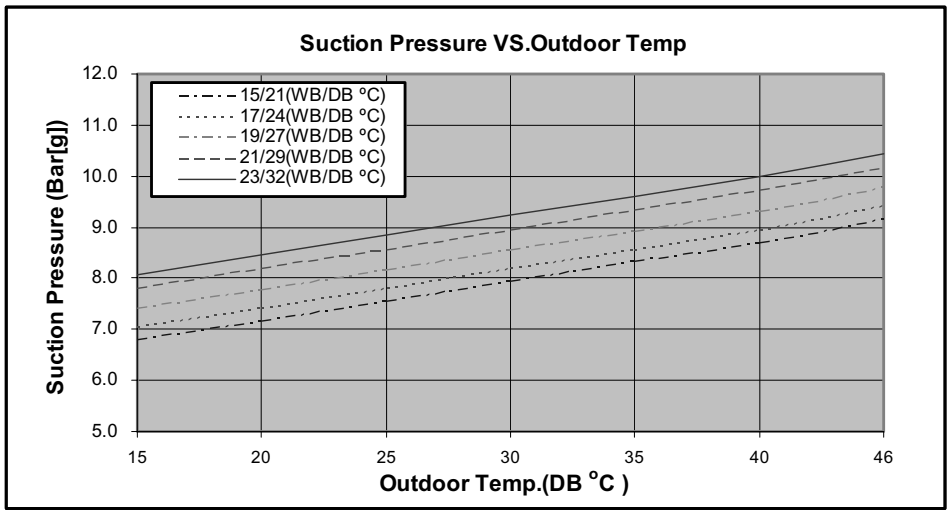
5.5.2 Heating

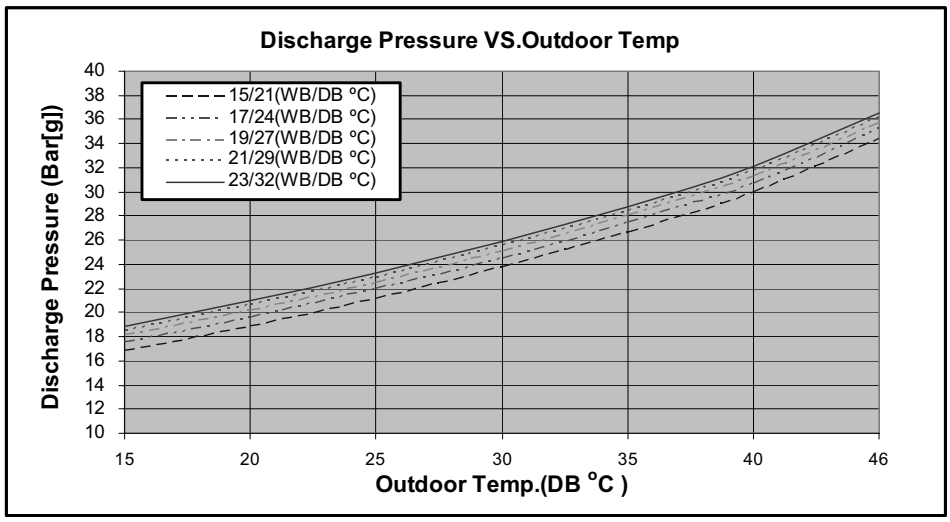
TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.05	**1**	0.975	0.963	—	—	—	—	—

* Minimum recommended tubing length between indoor and outdoor units is 3m.

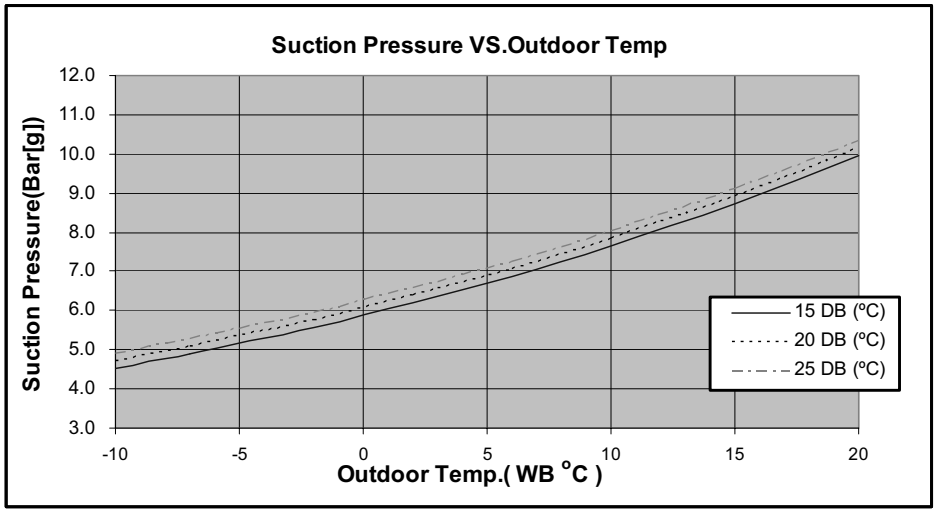
5.6 Pressure Curves.

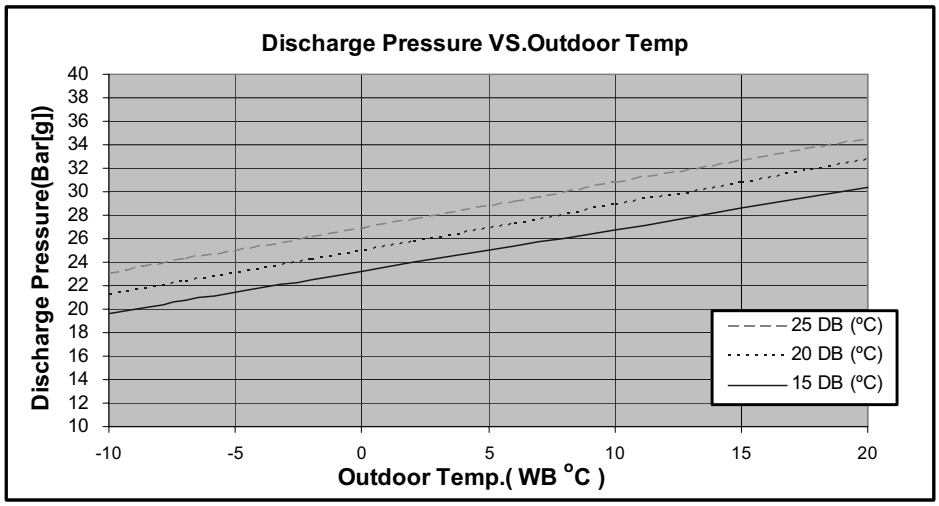
5.6.1 Cooling.





5.6.2 Heating.


Suction Pressure VS.Outdoor Temp
Suction Pressure(Bar[g])
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
15 DB (ºC)
20 DB (ºC)
25 DB (ºC)


Discharge Pressure VS.Outdoor Temp
Discharge Pressure(Bar[g])
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
25 DB (ºC)
20 DB (ºC)
15 DB (ºC)

5.7 PXD15 ONG14 R410A

5.7.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	4.32	4.48	4.58	4.69	4.76
	SC	2.74	2.86	2.97	3.05	3.10
	PI	0.96	0.96	0.96	0.96	0.97
20(1)	TC	4.18	4.41	4.55	4.65	4.73
	SC	2.69	2.83	2.95	3.04	3.09
	PI	1.04	1.04	1.05	1.05	1.05
25	TC	3.96	4.27	4.49	4.63	4.74
	SC	2.62	2.78	2.93	3.01	3.07
	PI	1.12	1.13	1.14	1.15	1.15
30	TC	3.70	4.03	4.35	4.51	4.64
	SC	2.54	2.70	2.87	2.95	3.01
	PI	1.21	1.23	1.24	1.25	1.26
35	TC	3.43	3.72	4.10	4.31	4.51
	SC	2.41	2.59	2.80	2.88	2.94
	PI	1.31	1.33	1.35	1.36	1.37
40	TC	3.11	3.39	3.70	4.05	4.25
	SC	2.27	2.45	2.65	2.73	2.79
	PI	1.41	1.43	1.46	1.47	1.49
46	TC	2.70	2.95	3.25	3.59	3.87
	SC	2.09	2.24	2.42	2.50	2.56
	PI	1.54	1.56	1.60	1.62	1.64

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.7.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	2.36	1.10	2.27	1.18	2.18	1.24
-7	2.54	1.13	2.45	1.19	2.36	1.26
-2	2.70	1.15	2.61	1.21	2.52	1.28
2	3.29	1.20	3.15	1.28	3.02	1.35
6	4.64	1.29	**4.50**	**1.38**	4.34	1.47
10	5.04	1.36	4.91	1.46	4.77	1.56
15	5.45	1.42	5.31	1.53	5.18	1.63
20	5.74	1.46	5.60	1.59	5.45	1.71

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.8 Capacity Correction Factor Due to Tubing Length

5.8.1 Cooling

TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.984	0.946	---	---	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

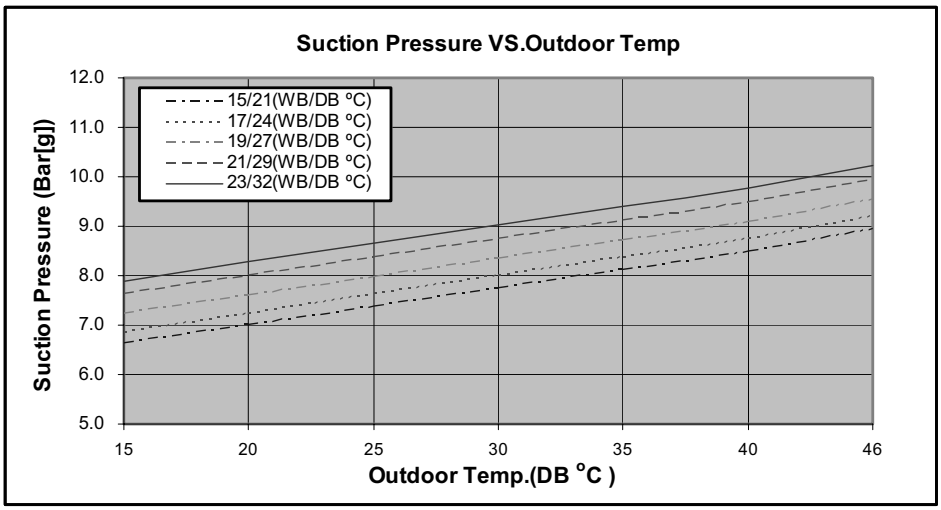
5.8.2 Heating

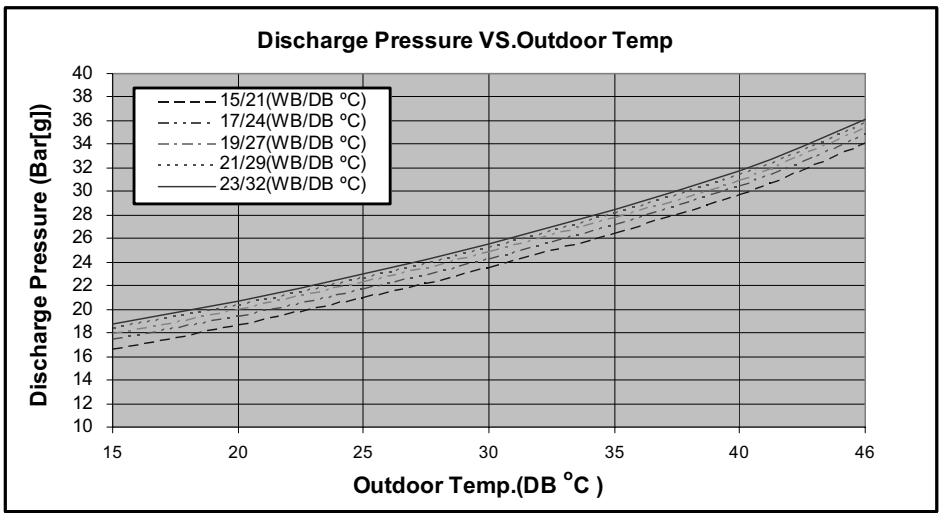
TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.04	**1**	0.995	0.971	---	---	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

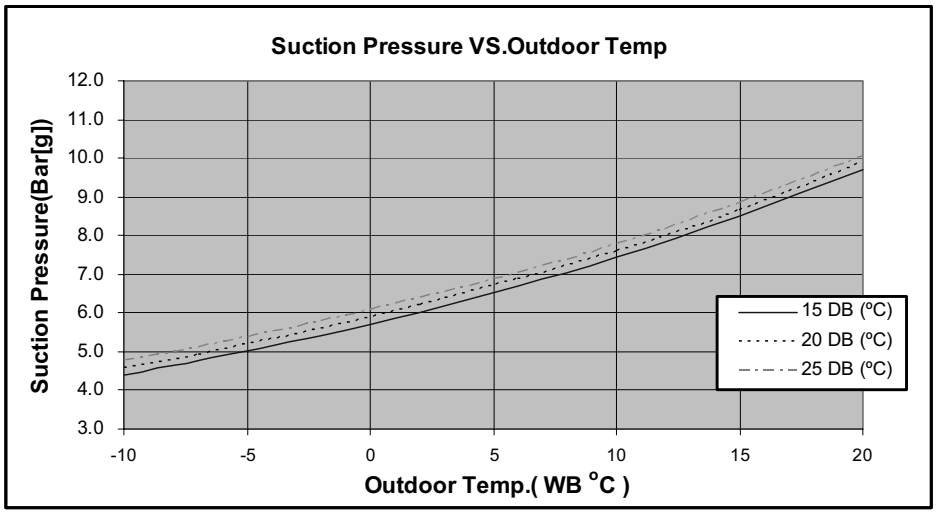
5.9 Pressure Curves.

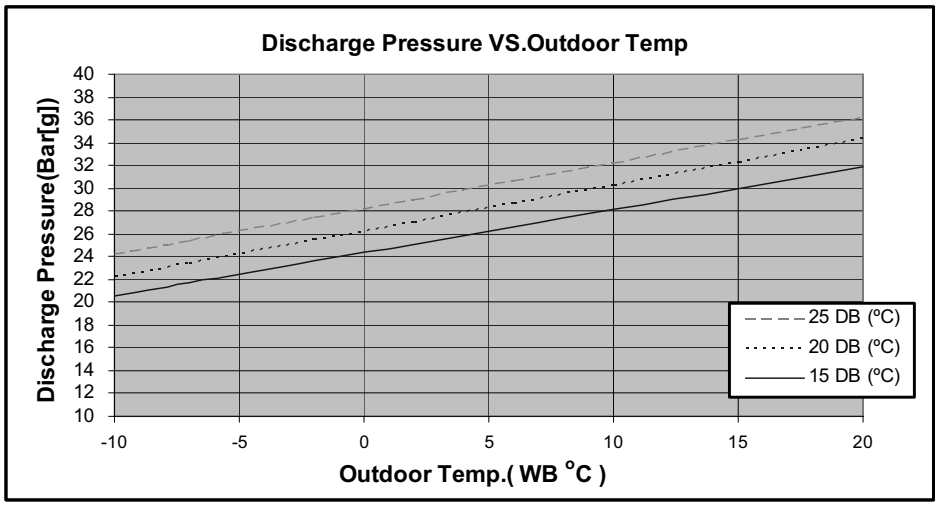
5.9.1 Cooling.





5.9.2 Heating.


Suction Pressure VS.Outdoor Temp
Suction Pressure(Bar[g])
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
15 DB (ºC)
20 DB (ºC)
25 DB (ºC)


Discharge Pressure VS.Outdoor Temp
Discharge Pressure(Bar[g])
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
-10
-5
0
5
10
15
20
Outdoor Temp.(WB °C)
25 DB (ºC)
20 DB (ºC)
15 DB (ºC)

5.10 PXD18 GC18 R410A

5.10.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	5.80	6.00	6.15	6.29	6.39
	SC	3.94	4.11	4.27	4.37	4.45
	PI	1.29	1.29	1.30	1.30	1.31
20(1)	TC	5.61	5.91	6.10	6.24	6.35
	SC	3.86	4.07	4.24	4.36	4.44
	PI	1.40	1.41	1.41	1.42	1.42
25	TC	5.31	5.73	6.02	6.21	6.36
	SC	3.76	3.99	4.21	4.33	4.41
	PI	1.51	1.52	1.53	1.54	1.56
30	TC	4.96	5.40	5.84	6.05	6.22
	SC	3.64	3.87	4.11	4.24	4.32
	PI	1.63	1.66	1.67	1.68	1.70
35	TC	4.59	4.99	5.50	5.78	6.05
	SC	3.46	3.71	4.02	4.14	4.22
	PI	1.76	1.79	1.82	1.83	1.84
40	TC	4.18	4.55	4.96	5.43	5.71
	SC	3.26	3.51	3.80	3.92	4.00
	PI	1.90	1.93	1.96	1.99	2.01
46	TC	3.62	3.96	4.36	4.82	5.19
	SC	3.01	3.22	3.47	3.59	3.67
	PI	2.08	2.11	2.16	2.19	2.21

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.10.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	3.02	1.42	2.90	1.51	2.79	1.58
-7	3.25	1.45	3.13	1.53	3.02	1.61
-2	3.45	1.47	3.34	1.56	3.22	1.65
2	4.20	1.54	4.03	1.64	3.85	1.73
6	5.92	1.65	**5.75**	**1.77**	5.55	1.88
10	6.44	1.75	6.27	1.87	6.10	2.00
15	6.96	1.82	6.79	1.96	6.61	2.09
20	7.33	1.88	7.16	2.04	6.96	2.19

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.11 Capacity Correction Factor Due to Tubing Length

5.11.1 Cooling

TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.990	0.975	0.960	0.945	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

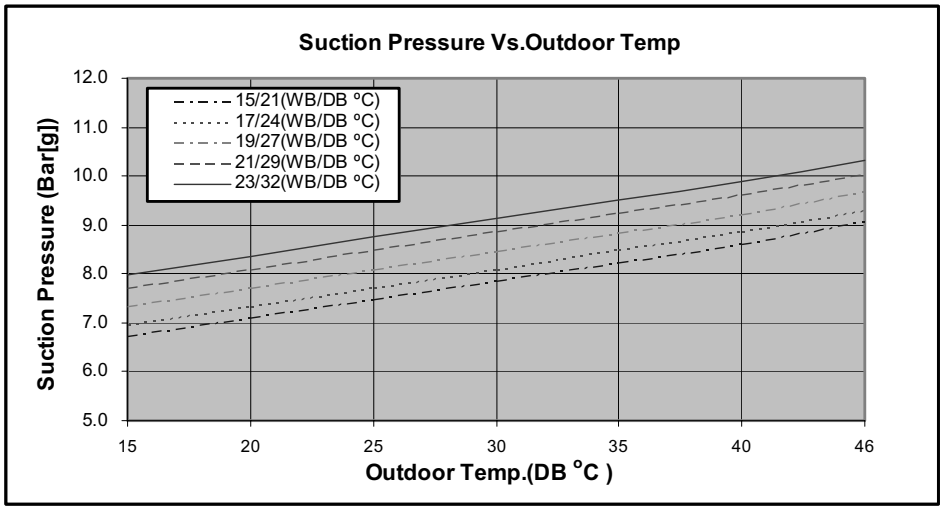
5.11.2 Heating

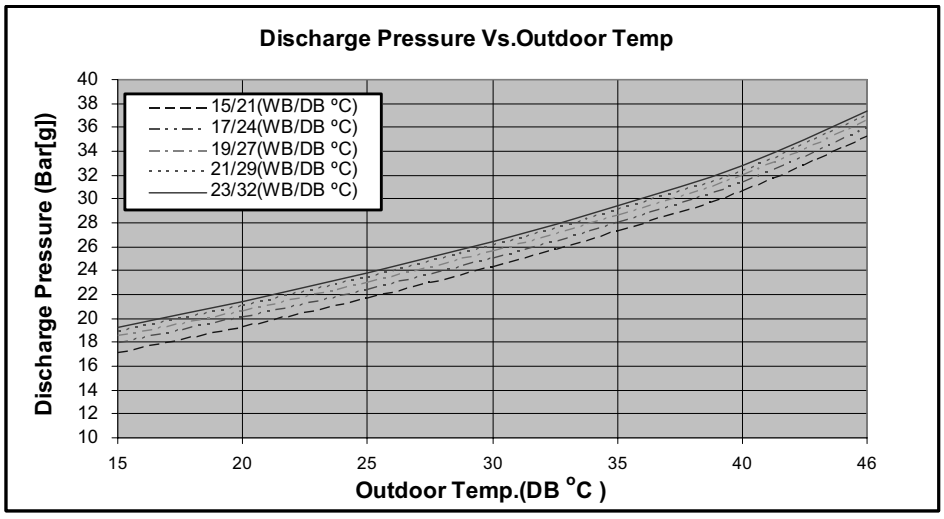
TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.03	**1**	1	0.997	0.992	0.988	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

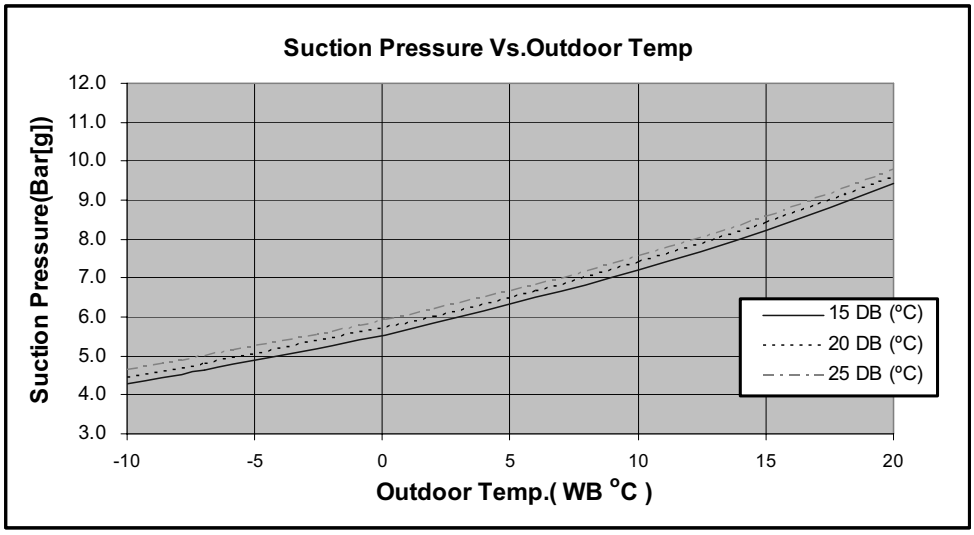
5.12 Pressure Curves.

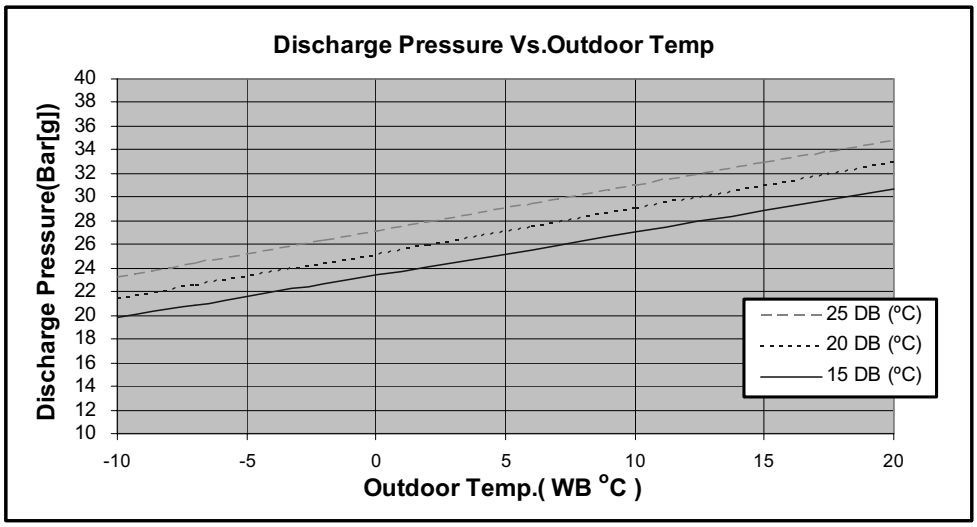
5.12.1 Cooling.





5.12.2 Heating.





5.13 PXD18 GC18 3PH R410A

5.13.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	5.80	6.00	6.15	6.29	6.39
	SC	4.09	4.27	4.43	4.55	4.63
	PI	1.25	1.26	1.26	1.26	1.27
20(1)	TC	5.61	5.91	6.10	6.24	6.35
	SC	4.01	4.23	4.41	4.53	4.62
	PI	1.36	1.37	1.37	1.38	1.38
25	TC	5.31	5.73	6.02	6.21	6.36
	SC	3.91	4.15	4.37	4.50	4.58
	PI	1.47	1.48	1.49	1.50	1.51
30	TC	4.96	5.40	5.84	6.05	6.22
	SC	3.79	4.02	4.28	4.40	4.49
	PI	1.59	1.61	1.63	1.64	1.65
35	TC	4.59	4.99	5.50	5.78	6.05
	SC	3.60	3.86	4.18	4.30	4.38
	PI	1.71	1.74	1.77	1.78	1.79
40	TC	4.18	4.55	4.96	5.43	5.71
	SC	3.39	3.65	3.95	4.08	4.16
	PI	1.85	1.88	1.91	1.93	1.95
46	TC	3.62	3.96	4.36	4.82	5.19
	SC	3.13	3.35	3.61	3.73	3.81
	PI	2.02	2.05	2.10	2.13	2.15

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.13.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	3.02	1.35	2.90	1.44	2.79	1.51
-7	3.25	1.39	3.13	1.46	3.02	1.54
-2	3.45	1.40	3.34	1.49	3.22	1.57
2	4.20	1.47	4.03	1.56	3.85	1.66
6	5.92	1.58	**5.75**	**1.69**	5.55	1.79
10	6.44	1.67	6.27	1.78	6.10	1.91
15	6.96	1.74	6.79	1.88	6.61	1.99
20	7.33	1.79	7.16	1.94	6.96	2.10

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.14 Capacity Correction Factor Due to Tubing Length

5.14.1 Cooling

TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.990	0.975	0.960	0.945	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

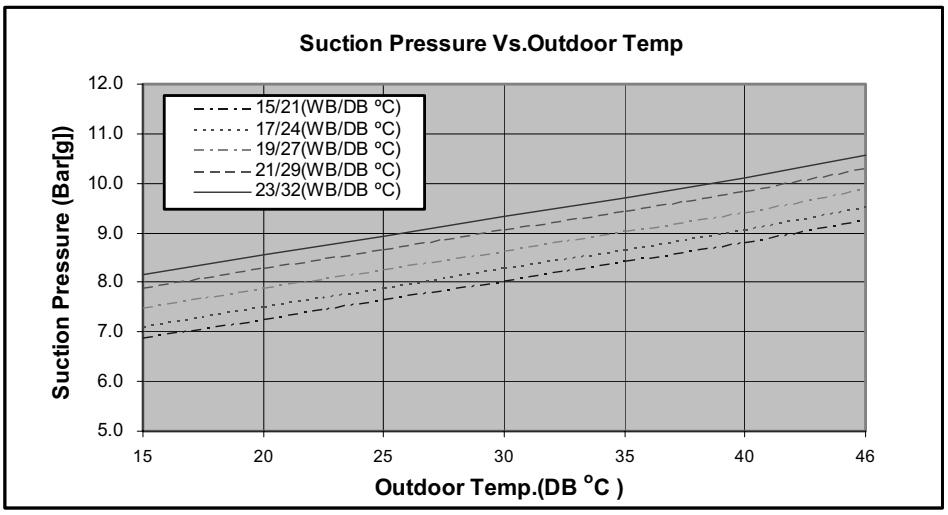
5.14.2 Heating

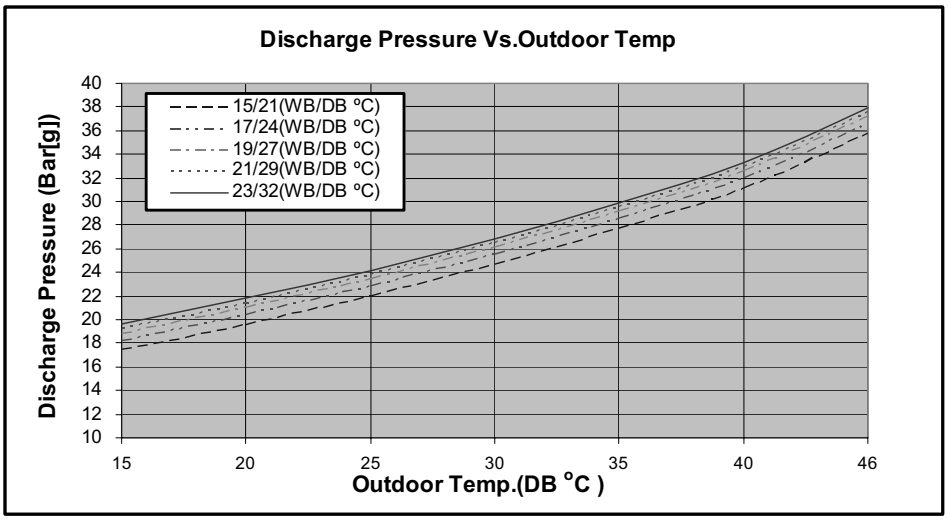
TOTAL TUBING LENGTH								
3m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.03	**1**	1	0.997	0.992	0.988	---	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

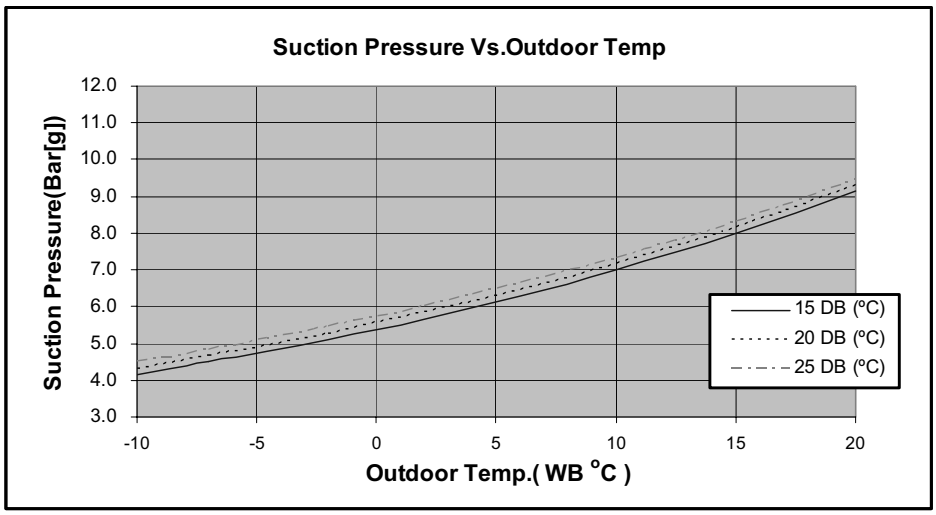
5.15 Pressure Curves.

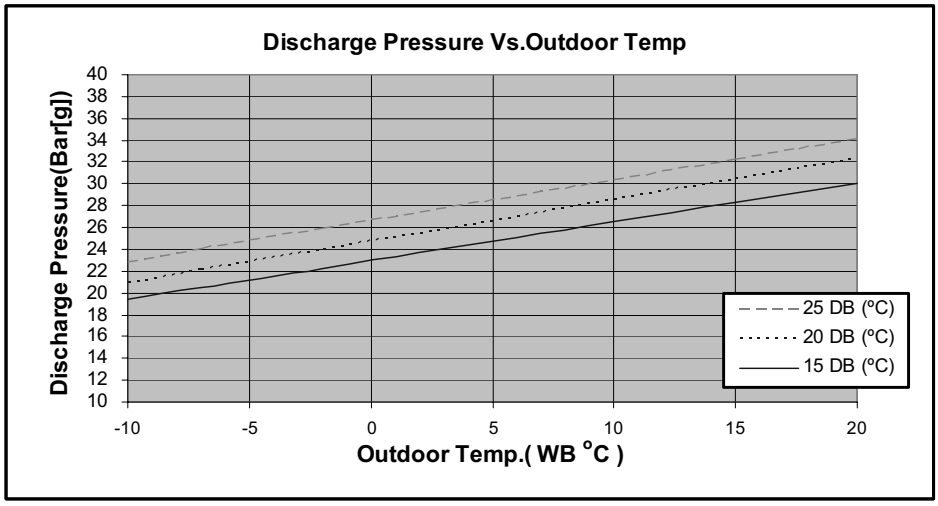
5.15.1 Cooling.





5.15.2 Heating.





5.16 PXD24 OU7-24 & 24T R410A

5.16.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	7.20	7.46	7.63	7.81	7.93
	SC	5.02	5.24	5.44	5.58	5.68
	PI	1.61	1.61	1.62	1.62	1.63
20(1)	TC	6.97	7.34	7.57	7.75	7.88
	SC	4.92	5.19	5.41	5.56	5.67
	PI	1.75	1.75	1.76	1.77	1.77
25	TC	6.59	7.12	7.48	7.71	7.89
	SC	4.80	5.09	5.37	5.52	5.63
	PI	1.89	1.90	1.91	1.93	1.94
30	TC	6.16	6.71	7.25	7.51	7.73
	SC	4.65	4.94	5.25	5.40	5.51
	PI	2.04	2.07	2.08	2.10	2.12
35	TC	5.71	6.19	6.83	7.17	7.51
	SC	4.42	4.74	5.13	5.28	5.38
	PI	2.20	2.23	2.27	2.29	2.30
40	TC	5.19	5.65	6.16	6.74	7.09
	SC	4.16	4.48	4.85	5.01	5.11
	PI	2.37	2.41	2.45	2.48	2.50
46	TC	4.50	4.92	5.41	5.98	6.44
	SC	3.84	4.11	4.43	4.58	4.68
	PI	2.59	2.63	2.69	2.73	2.76

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.16.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	4.06	1.70	3.91	1.81	3.75	6.29
-7	4.37	1.75	4.21	1.84	4.06	6.41
-2	4.64	1.77	4.49	1.87	4.33	6.54
2	5.65	1.85	5.41	1.97	5.18	6.89
6	7.24	1.99	**7.03**	**2.13**	6.78	7.47
10	7.87	2.10	7.66	2.25	7.45	7.93
15	8.51	2.19	8.30	2.36	8.08	8.30
20	8.96	2.26	8.75	2.45	8.51	8.72

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.17 Capacity Correction Factor Due to Tubing Length

5.17.1 Cooling

TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.01	**1**	0.98	0.97	0.96	0.95	0.94	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

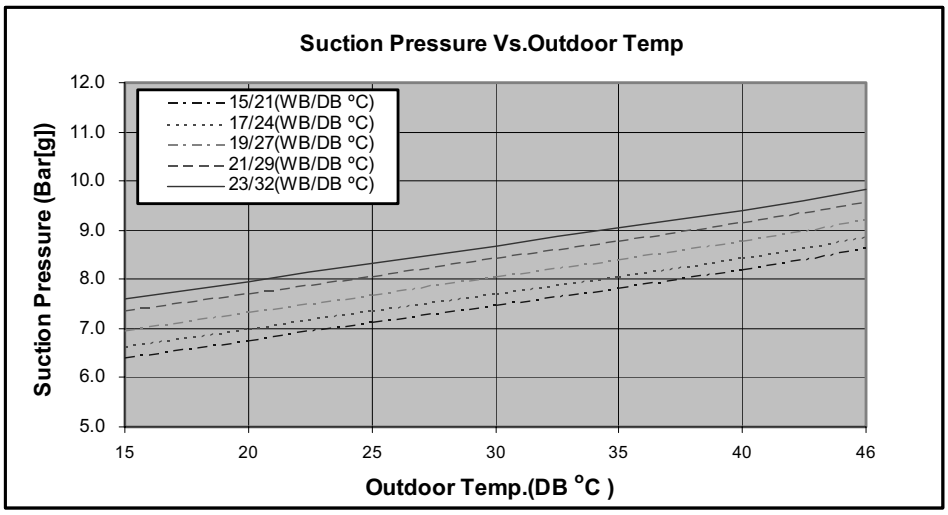
5.17.2 Heating

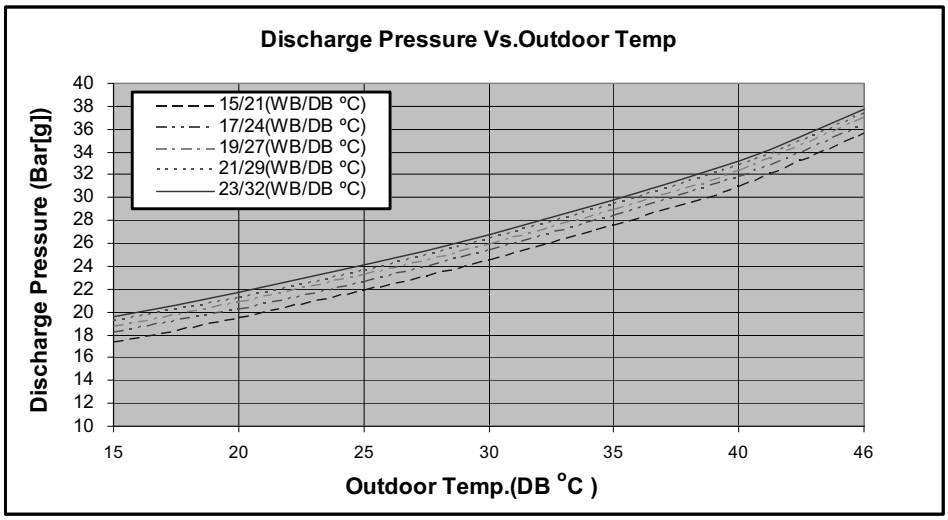
TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.99	0.99	0.98	0.97	0.97	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

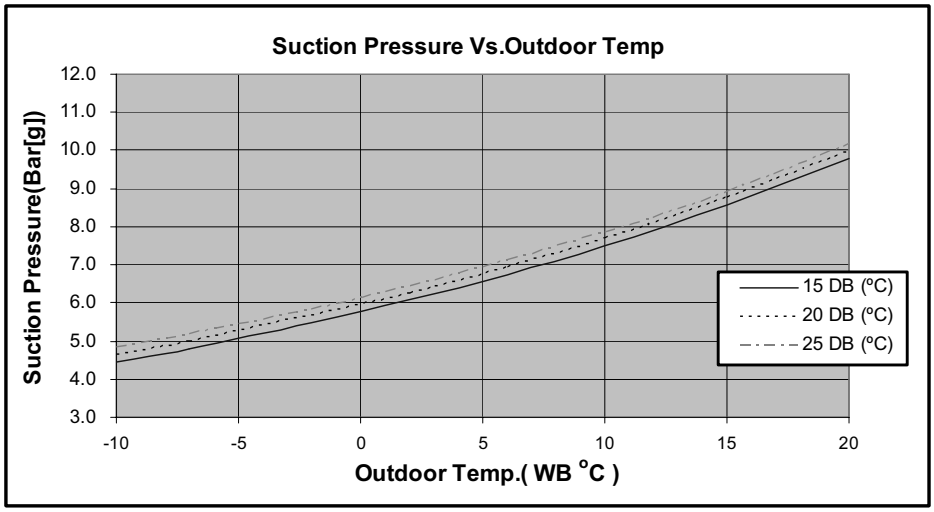
5.18 Pressure Curves.

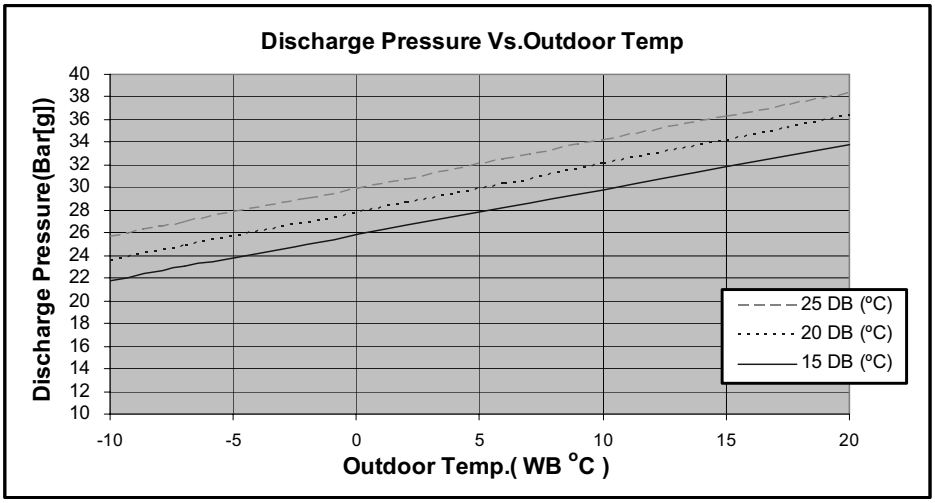
5.18.1 Cooling.





5.18.2 Heating.





5.19 PXD30 OU8- 30 R410A

5.19.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	8.98	9.30	9.52	9.75	9.89
	SC	5.68	5.92	6.15	6.31	6.42
	PI	2.12	2.12	2.13	2.13	2.14
20(1)	TC	8.69	9.16	9.45	9.67	9.84
	SC	5.57	5.87	6.12	6.29	6.41
	PI	2.30	2.31	2.32	2.33	2.33
25	TC	8.22	8.88	9.33	9.61	9.85
	SC	5.42	5.76	6.07	6.24	6.36
	PI	2.49	2.50	2.52	2.54	2.55
30	TC	7.69	8.37	9.04	9.36	9.64
	SC	5.25	5.58	5.94	6.11	6.23
	PI	2.68	2.72	2.75	2.77	2.79
35	TC	7.12	7.72	8.52	8.95	9.37
	SC	5.00	5.36	5.80	5.97	6.08
	PI	2.89	2.94	2.99	3.01	3.03
40	TC	6.47	7.05	7.69	8.41	8.84
	SC	4.71	5.07	5.49	5.66	5.78
	PI	3.12	3.17	3.22	3.26	3.30
46	TC	5.62	6.14	6.75	7.46	8.04
	SC	4.34	4.65	5.00	5.18	5.29
	PI	3.41	3.46	3.54	3.59	3.63

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.19.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	5.00	2.23	4.81	2.38	4.61	2.50
-7	5.38	2.29	5.19	2.41	5.00	2.54
-2	5.71	2.32	5.52	2.46	5.33	2.59
2	6.95	2.43	6.66	2.58	6.38	2.73
6	8.91	2.61	**8.65**	**2.79**	8.35	2.96
10	9.69	2.75	9.43	2.94	9.17	3.15
15	10.47	2.87	10.21	3.10	9.95	3.29
20	11.03	2.96	10.77	3.21	10.47	3.46

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.20 Capacity Correction Factor Due to Tubing Length

5.20.1 Cooling

TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.01	**1**	0.98	0.97	0.96	0.95	0.94	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

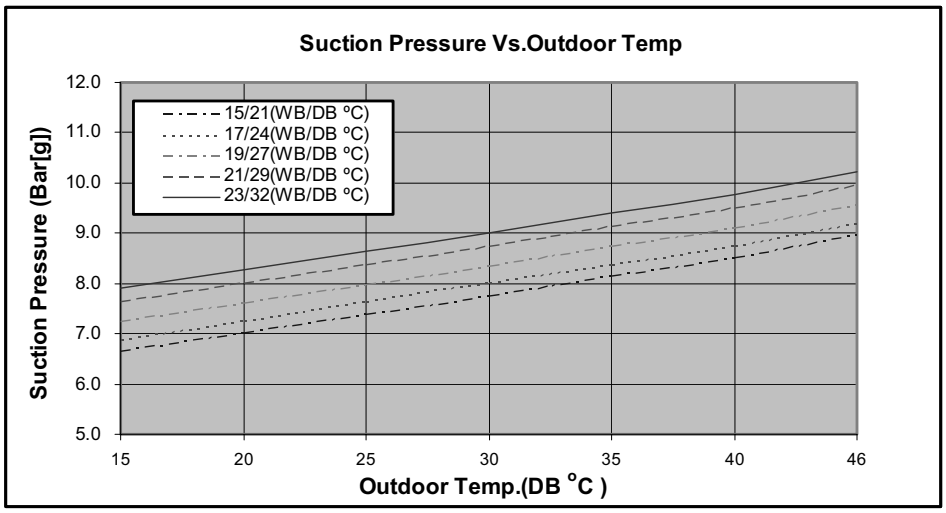
5.20.2 Heating

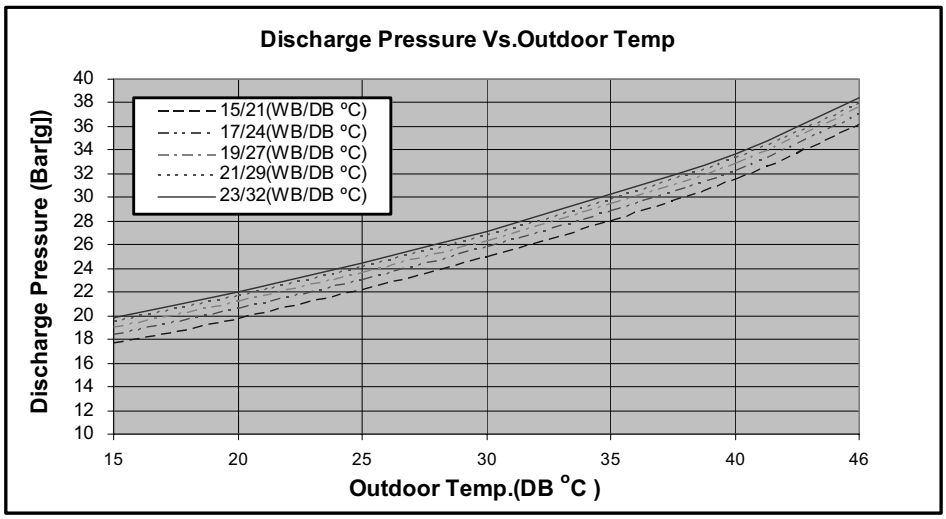
TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.99	0.99	0.98	0.97	0.97	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

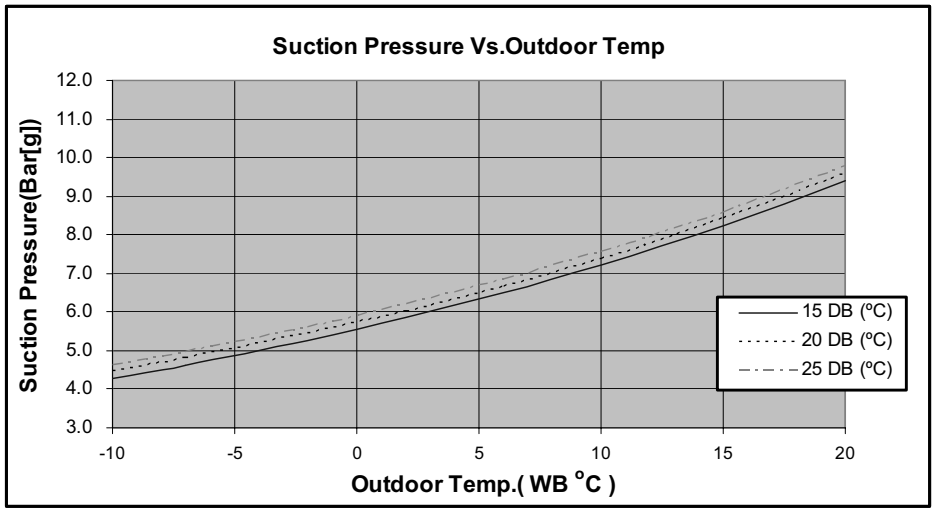
5.21 Pressure Curves.

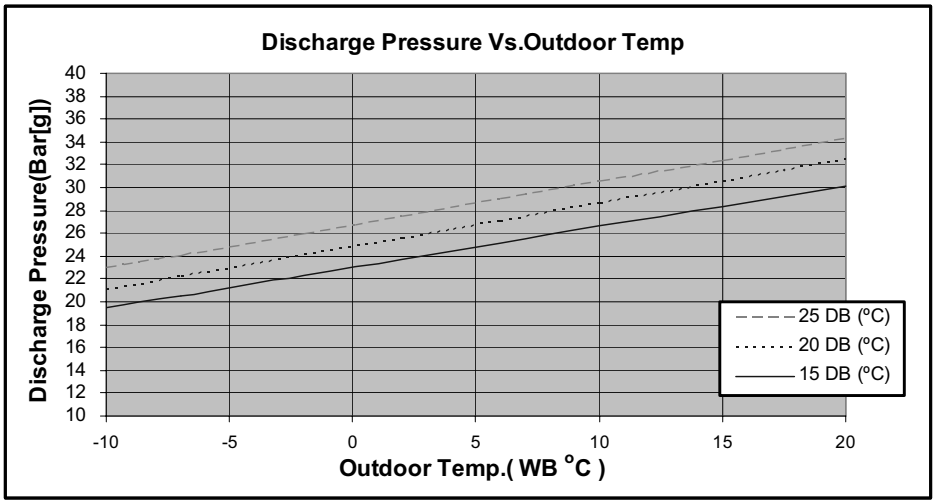
5.21.1 Cooling.





5.21.2 Heating.





5.22 PXD30 OU8- 30T R410A

5.22.1 Cooling Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

ENTERING AIR DB OU COIL (°C)	DATA	ENTERING AIR WB/DB ID COIL (°C)				
		15/21	17/24	19/27	21/29	23/32
15(1)	TC	8.75	9.06	9.27	9.49	9.64
	SC	5.53	5.77	5.99	6.14	6.26
	PI	1.96	1.97	1.97	1.98	1.99
20(1)	TC	8.46	8.92	9.20	9.42	9.58
	SC	5.42	5.72	5.96	6.13	6.24
	PI	2.13	2.14	2.15	2.16	2.16
25	TC	8.01	8.65	9.09	9.37	9.59
	SC	5.28	5.61	5.91	6.08	6.20
	PI	2.30	2.32	2.34	2.35	2.37
30	TC	7.49	8.15	8.81	9.12	9.39
	SC	5.12	5.44	5.78	5.95	6.07
	PI	2.49	2.52	2.54	2.56	2.59
35	TC	6.93	7.52	8.30	8.72	9.13
	SC	4.87	5.22	5.65	5.81	5.93
	PI	2.68	2.73	2.77	2.79	2.81
40	TC	6.31	6.86	7.49	8.19	8.61
	SC	4.59	4.94	5.34	5.51	5.63
	PI	2.89	2.94	2.99	3.02	3.05
46	TC	5.47	5.98	6.58	7.27	7.83
	SC	4.23	4.53	4.87	5.04	5.16
	PI	3.16	3.21	3.28	3.33	3.36

LEGEND

TC – Total Cooling Capacity, kW
SC – Sensible Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

(1) Marked area is below standard operating limits. For operating in low ambient conditions, refer to Optional Accessories (Chapter 15).

5.22.2 Heating Mode at 7.5m Tubing Connection.

230V : Indoor Fan at High Speed.

	ENTERING AIR DB ID COIL (°C)					
	15		20		25	
ENTERING AIR WB OU COIL (°C)	TH	PI	TH	PI	TH	PI
-10	4.79	2.10	4.61	2.24	4.43	2.35
-7	5.16	2.16	4.98	2.27	4.79	2.40
-2	5.48	2.18	5.30	2.31	5.11	2.45
2	6.66	2.29	6.39	2.43	6.12	2.58
6	8.55	2.46	**8.30**	**2.63**	8.01	2.79
10	9.30	2.60	9.05	2.77	8.80	2.97
15	10.04	2.71	9.79	2.92	9.55	3.10
20	10.58	2.79	10.33	3.02	10.04	3.26

* the above chart includes the weighted deicing infleuence.

LEGEND

TH – Total Heating Capacity, kW
PI – Power Input, kW
WB – Wet Bulb Temp., (°C)
DB – Dry Bulb Temp., (°C)
ID – Indoor
OU – Outdoor

5.23 Capacity Correction Factor Due to Tubing Length

5.23.1 Cooling

TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.01	**1**	0.98	0.97	0.96	0.95	0.94	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

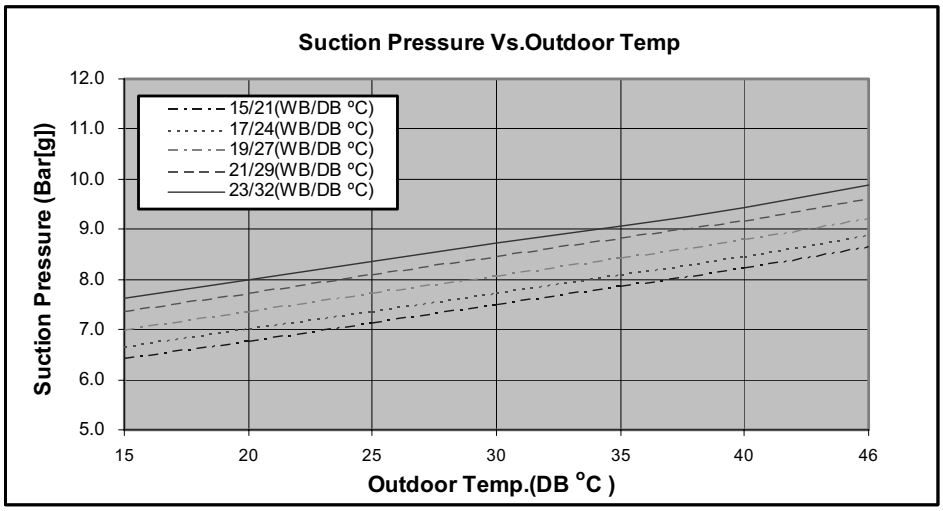
5.23.2 Heating

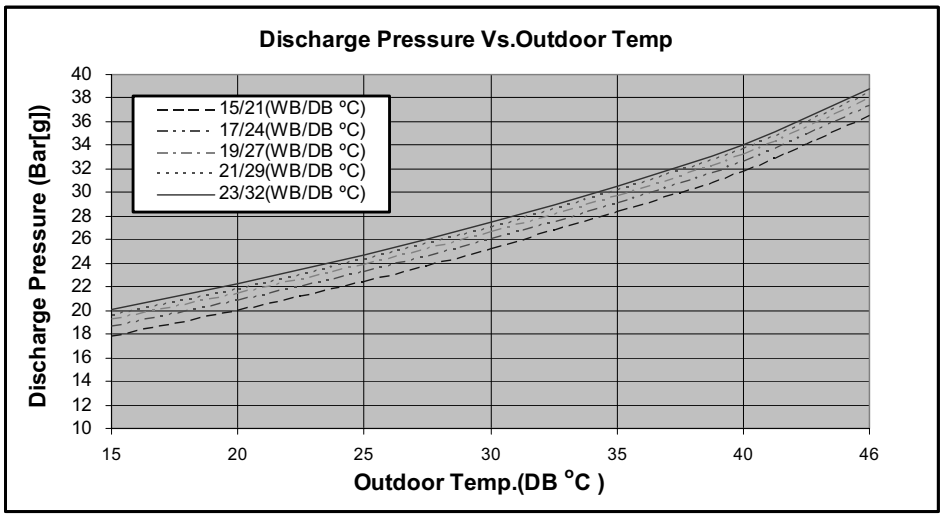
TOTAL TUBING LENGTH								
4m	**7.5m**	10m	15m	20m	25m	30m	40m	50m
1.02	**1**	0.99	0.99	0.98	0.97	0.97	---	---

* Minimum recommended tubing length between indoor and outdoor units is 3m.

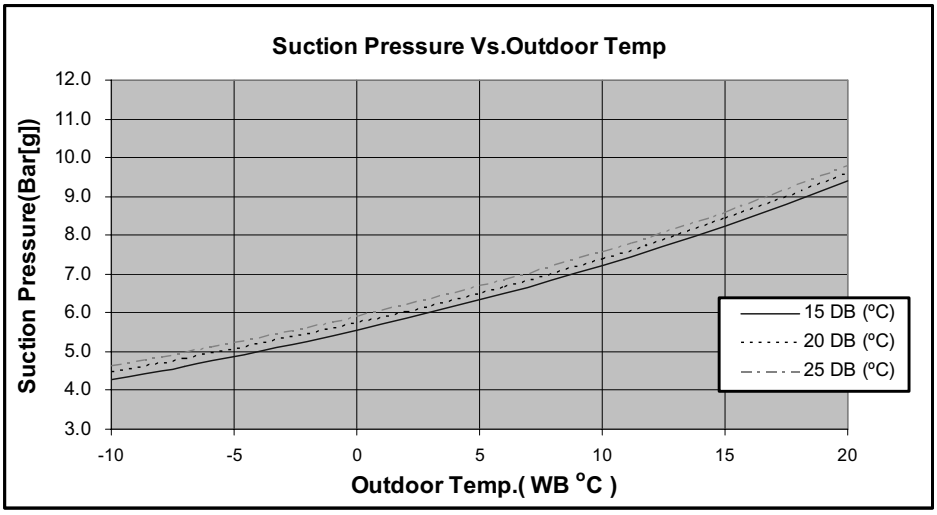
5.24 Pressure Curves.

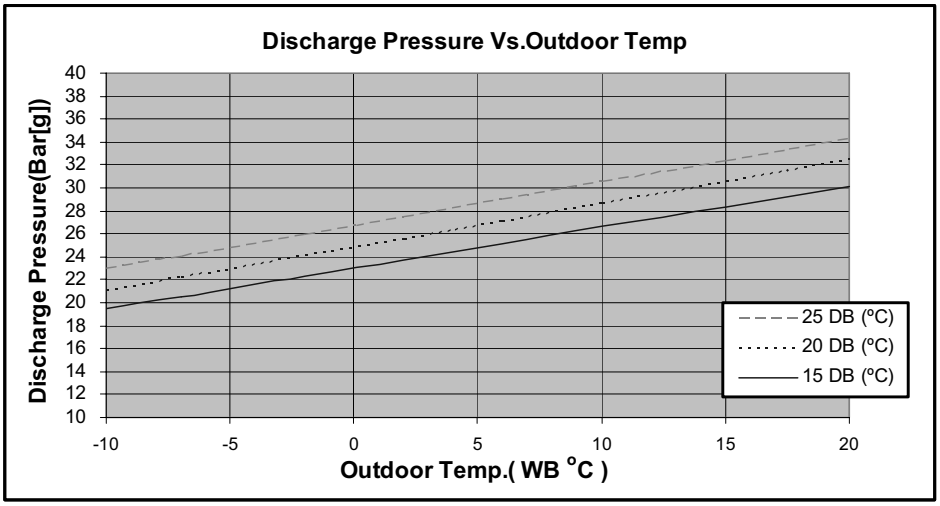
5.24.1 Cooling.





5.24.2 Heating.





6. ELECTRICAL DATA

6.1 Single Phase Units

MODEL	PXD 9	PXD 12	PXD 15	PXD 18	
Power Supply	To indoor	To indoor	To indoor	To Indoor	To outdoor
	1PH-230V-50Hz	1PH-230V-50Hz	1PH-230V-50Hz	1PH-230V-50Hz	
Max Current, A	7.1	7.6	10.4	12	
Circuit Breaker	10	10	15	15	
Power Supply Wiring No. X Cross Section mm^2	3x1.5 mm^2	3x1.5 mm^2	3x1.5 mm^2	3x2.5 mm^2	
Interconnecting Cable RC Model No. X Cross Section mm^2	5x1.5 mm^2 +2x0.5 mm^2 (OCT sensor)	5x1.5 mm^2 +2x0.5 mm^2 (OCT sensor)	5x1.5 mm^2 +2x0.5 mm^2 (OCT sensor)	5x2.5 mm^2 +2x0.5 mm^2 (OCT sensor)	6x1.5 mm^2 +2x0.5 mm^2 (OCT sensor)
Interconnecting Cable ST Model No. X Cross Section mm^2	4x1.5 mm^2	4x1.5 mm^2	4x1.5 mm^2	4x2.5 mm	5x2.5 mm

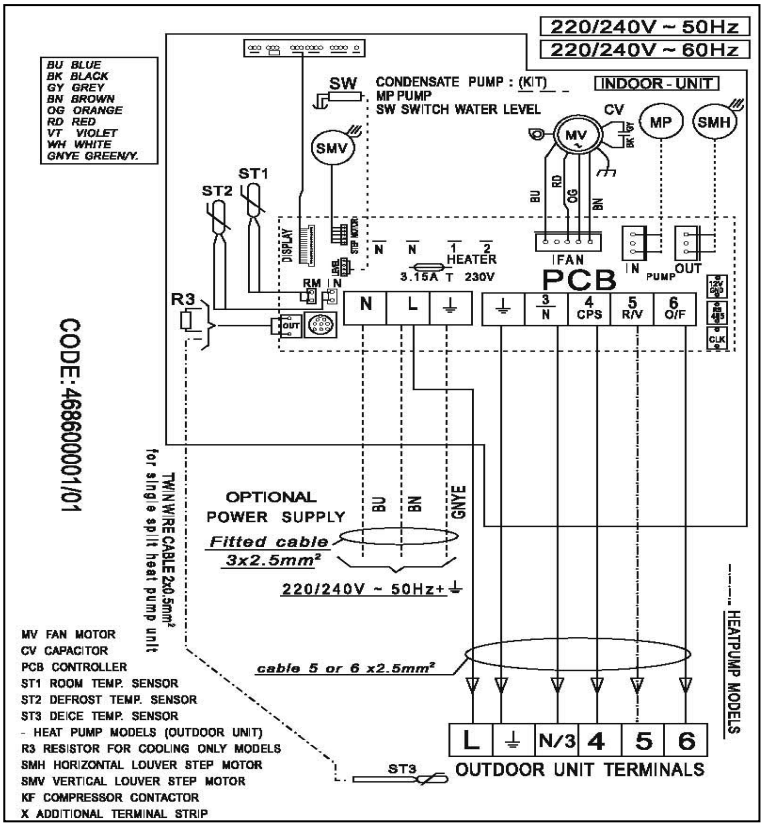
MODEL	PXD 24		PXD 30
Power Supply	To outdoor	To Outdoor	To outdoor
	1PH-230V-50Hz		1PH – 230V – 50 Hz
Max Current, A	15		17
Circuit Breaker	20		25
Power Supply Wiring No. X Cross Section mm^2	3x2.5 mm^2		3 X 4 mm^2
Interconnecting Cable RC Model No. X Cross Section mm^2	5x2.5 mm^2 +2x0.5 mm^2 (OCT sensor)	6 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)	6x2.5 mm^2 +2x0.5 mm^2 (OCT sensor)
Interconnecting Cable ST Model No. X Cross Section mm^2	4x2.5 mm^2	5 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)	5x2.5 mm^2

6.2 Three Phase Units

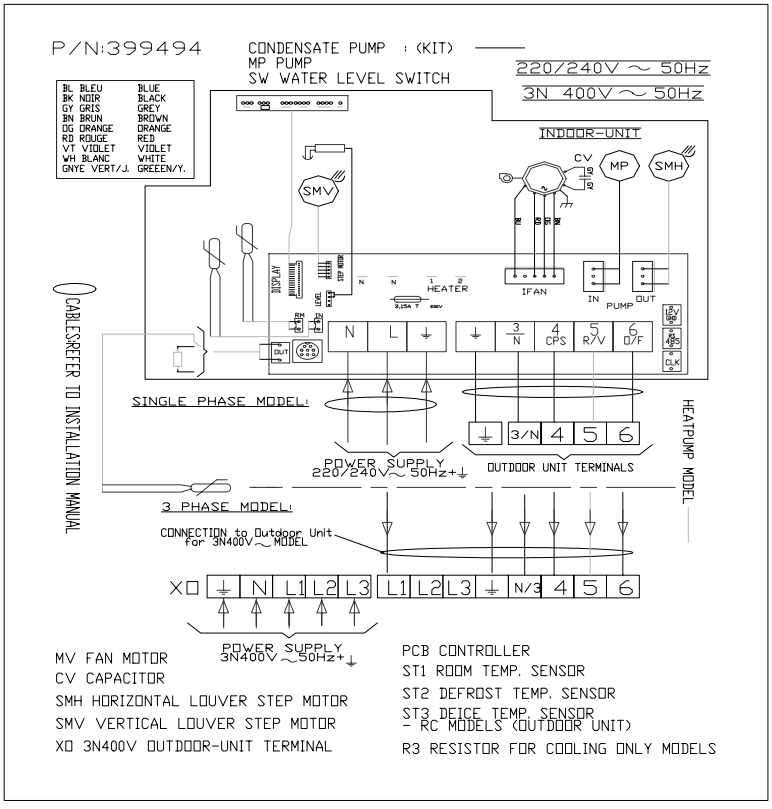
MODEL	PXD 18	PXD 24T	PXD 30T
Power Supply	To outdoor	To outdoor	To Outdoor
	3PH-400V-50Hz	3PH – 400V – 50 Hz	3PH – 400V – 50 Hz
Max Current, A	4.2	3 x 7.5	3 x 9.2
Circuit Breaker	6	3 x 10	3 x 16
Power Supply Wiring No. X Cross Section mm^2	5x1.5mm^2	5 x 1.5 mm^2	5 X 2.5 mm^2
Interconnecting Cable RC Model No. X Cross Section mm^2	6x1.5 mm^2 +2x0.5 mm^2 (OCT senser)	6 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)	6 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)
Interconnecting Cable ST Model No. X Cross Section mm^2	5x1.5 mm^2	5 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)	5 X 1.5 mm^2 + 2 X 0.5 mm^2 (OCT Sensor)

7. WIRING DIAGRAMS

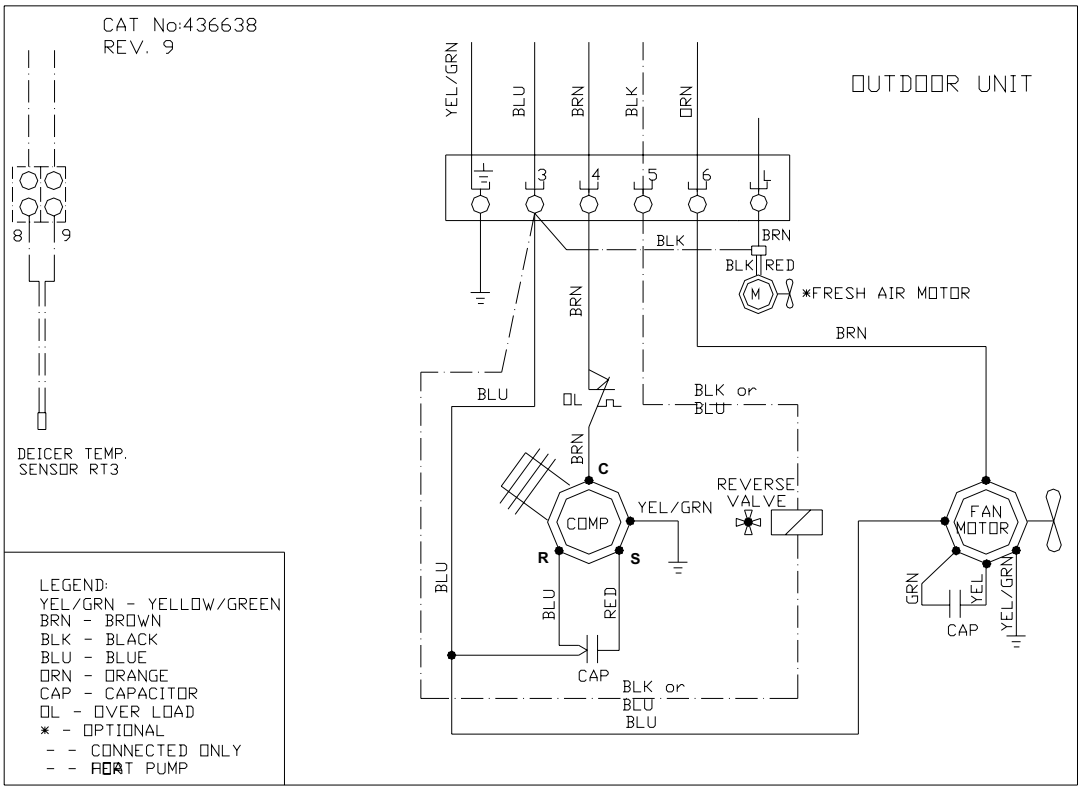
7.1 Indoor Unit: PXD 9, 12, 15



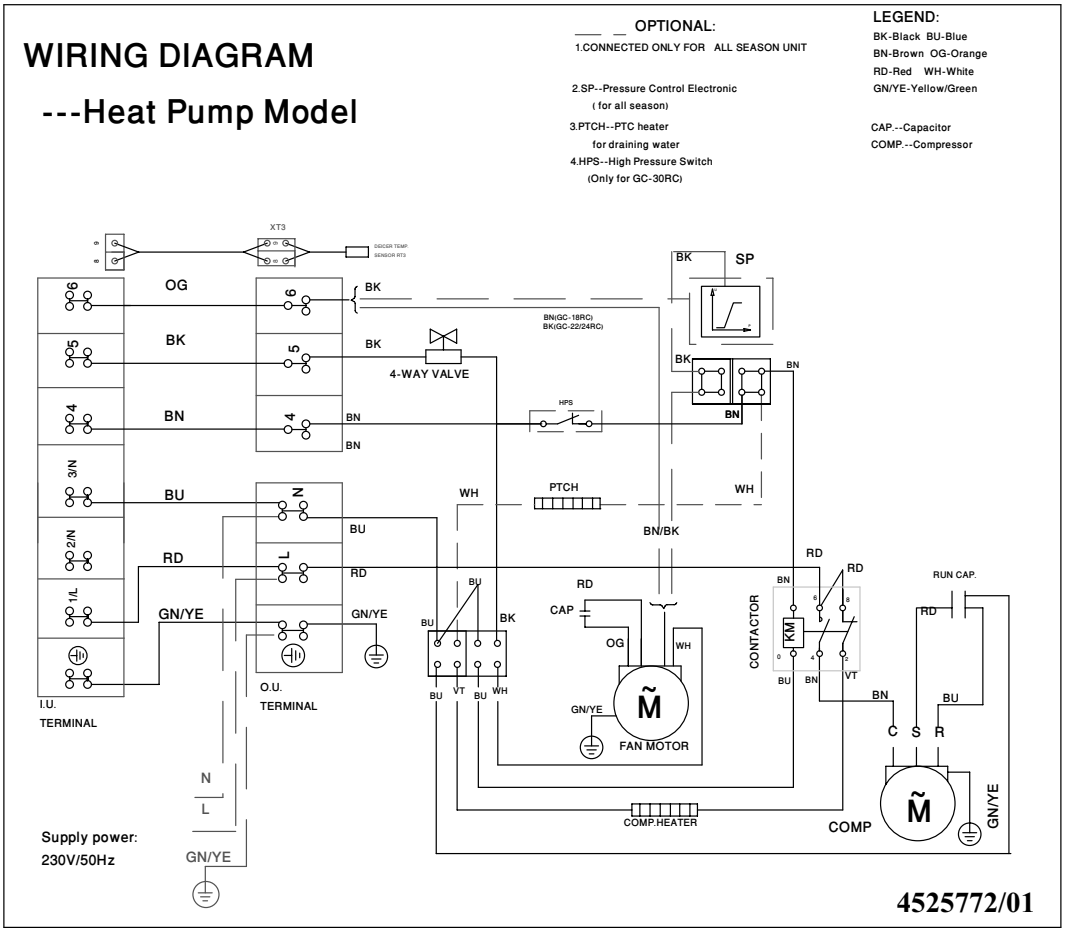
7.2 Indoor Unit: PXD 18, 24, 30 1PH/3PH



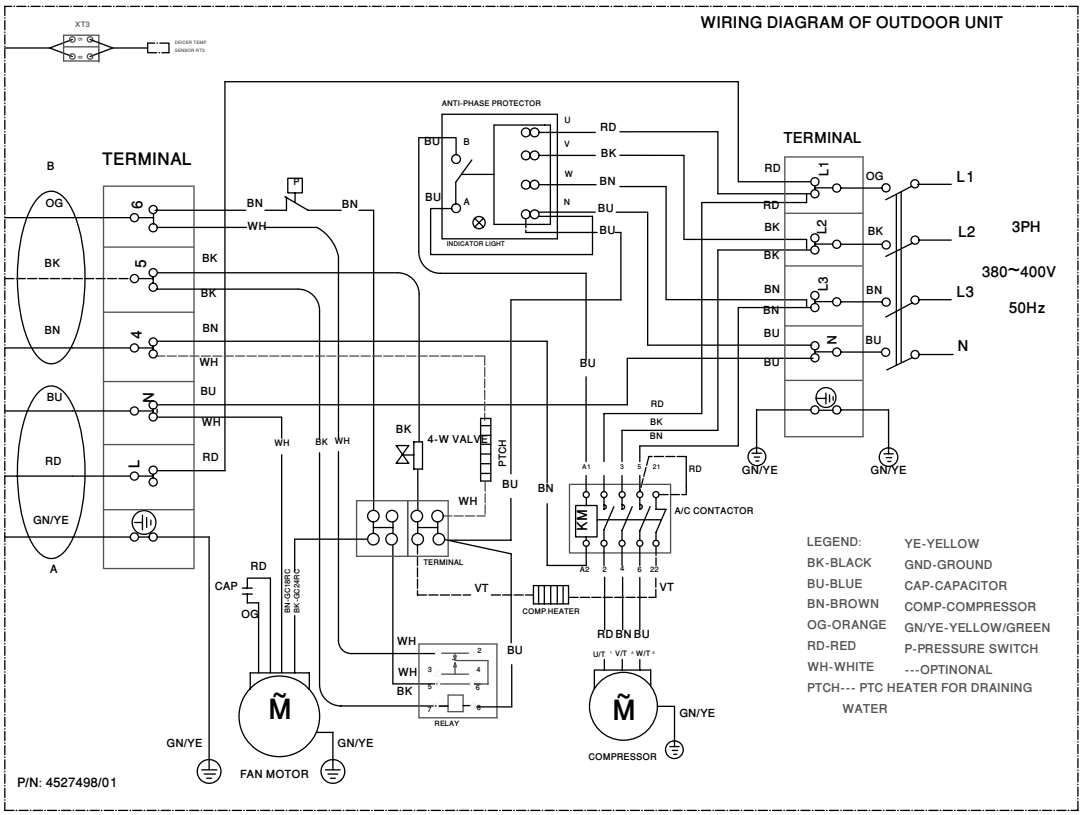
7.3 Outdoor Unit: ONG 9, 12, 15



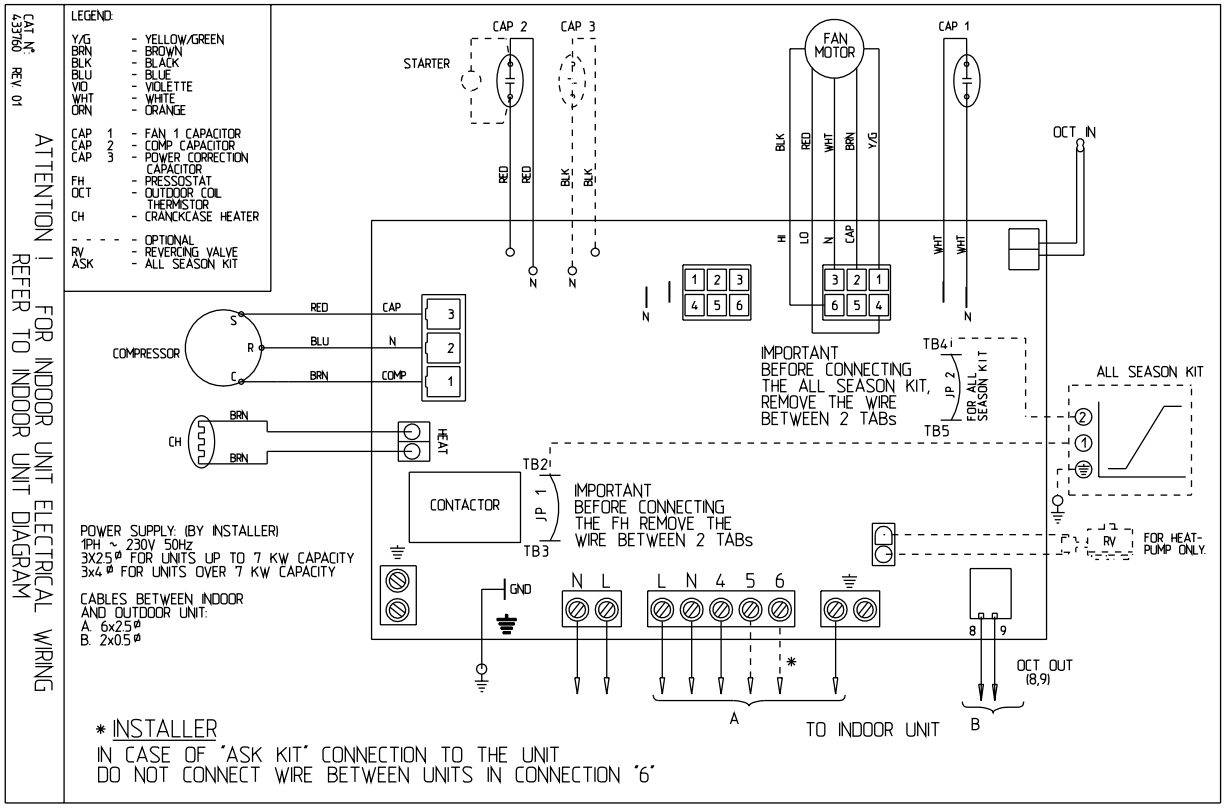
7.4 Outdoor Unit: GC 18



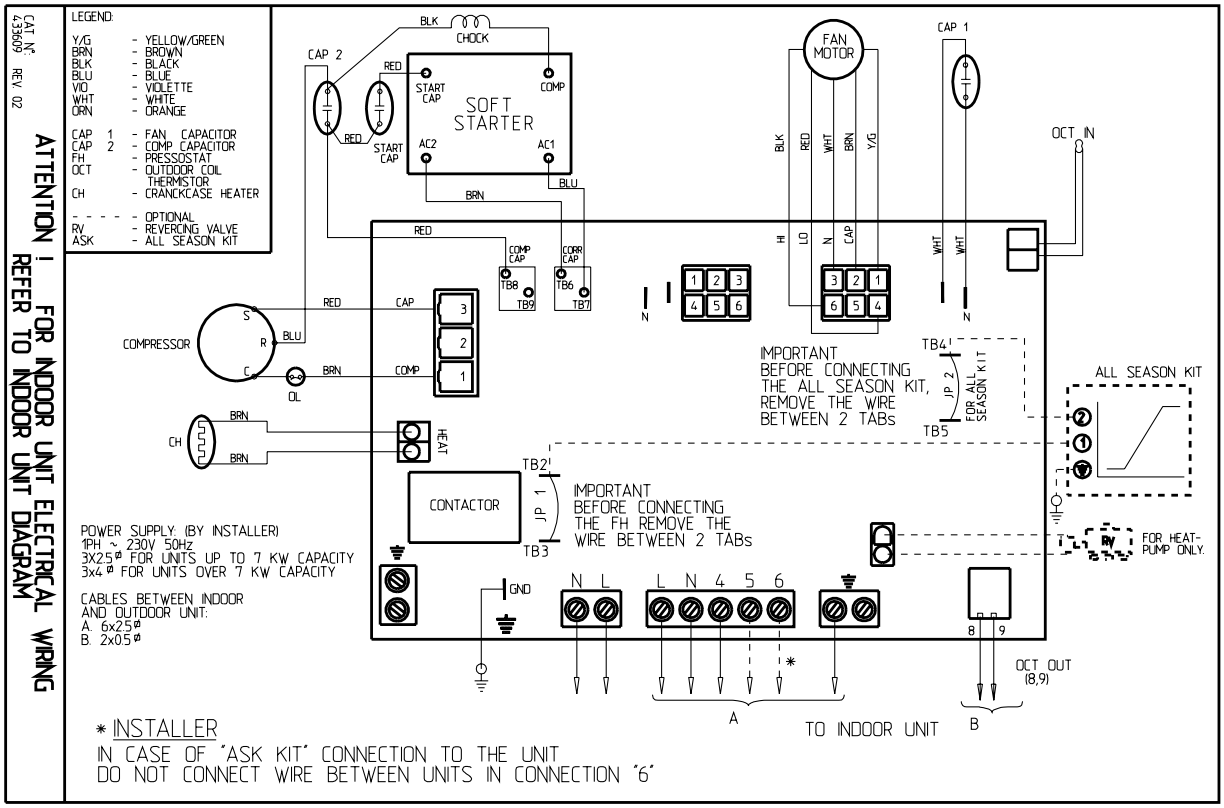
7.5 Outdoor Unit: GC 18 3PH



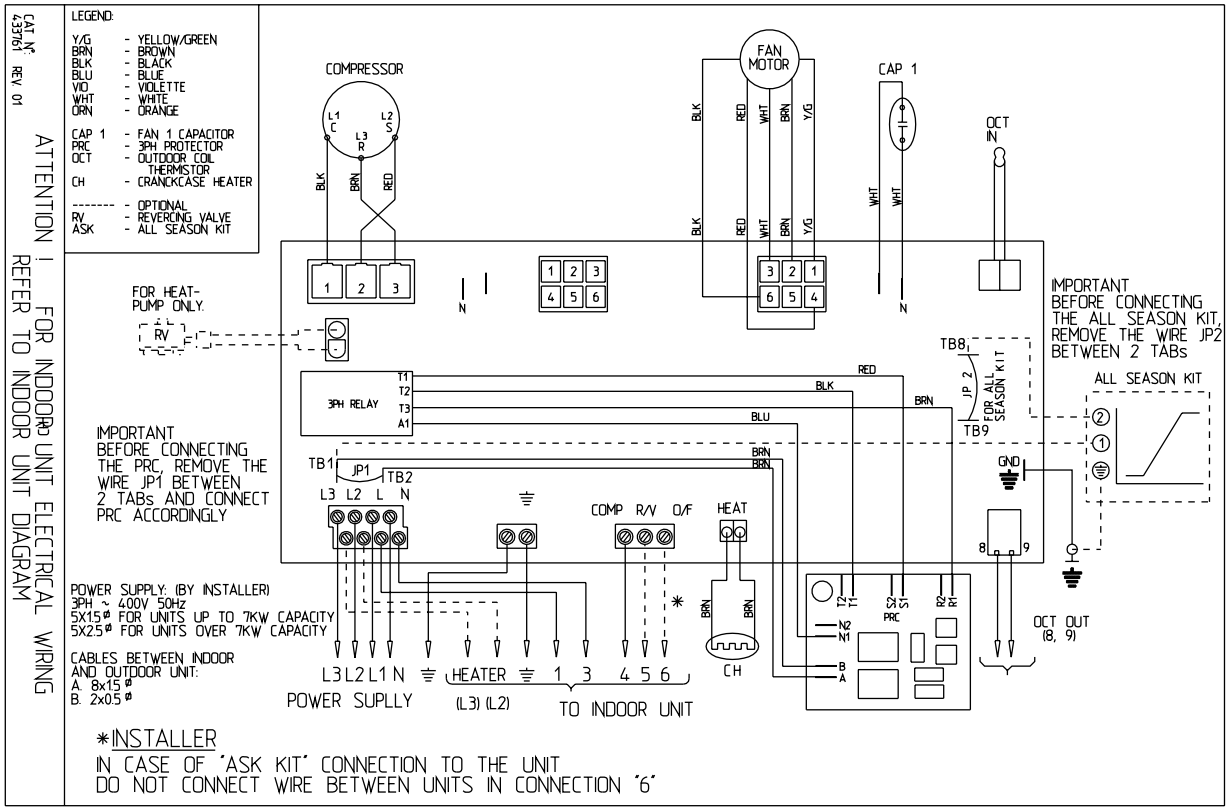
7.6 Outdoor Unit: OU7-24 / OU8-30 1PH



7.7 Outdoor Unit: OU8-30 1PH (with soft starter)

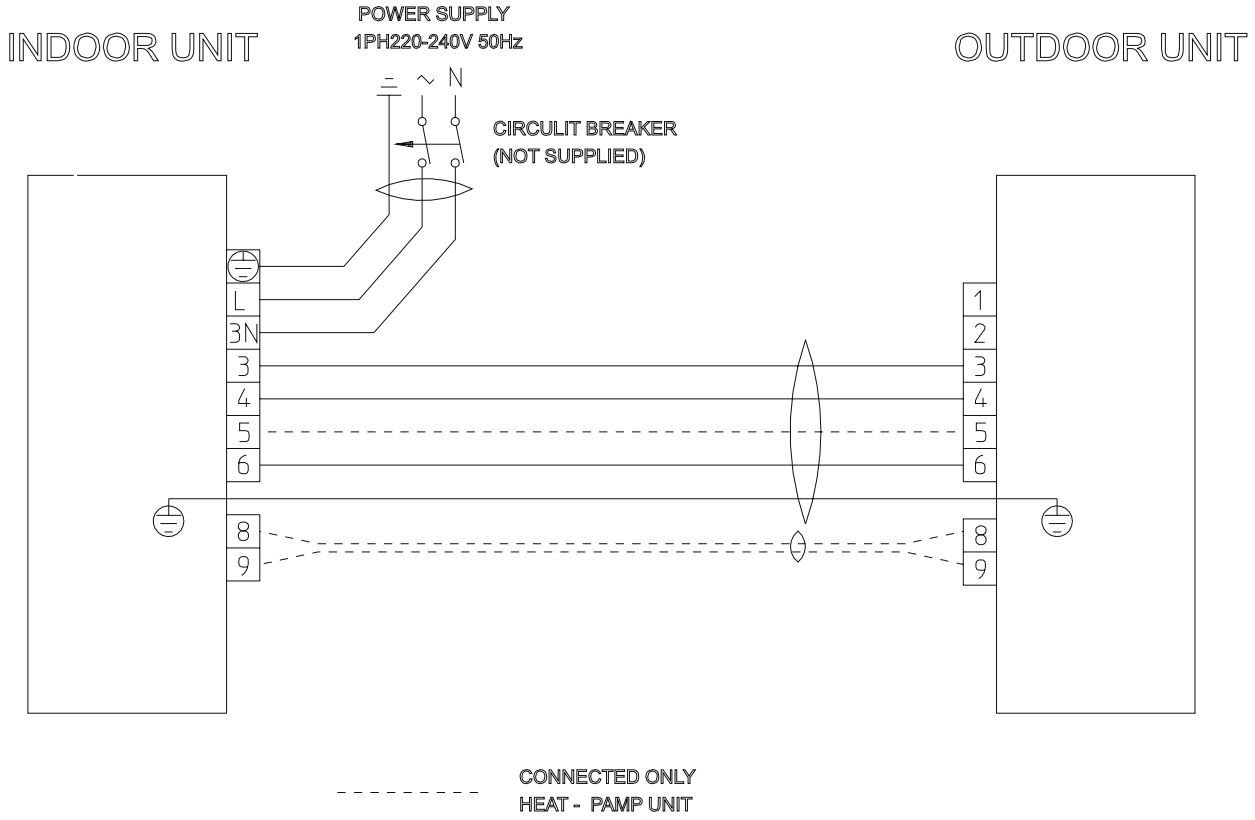


7.8 Outdoor Unit: OU7-24 / OU8-30 3PH

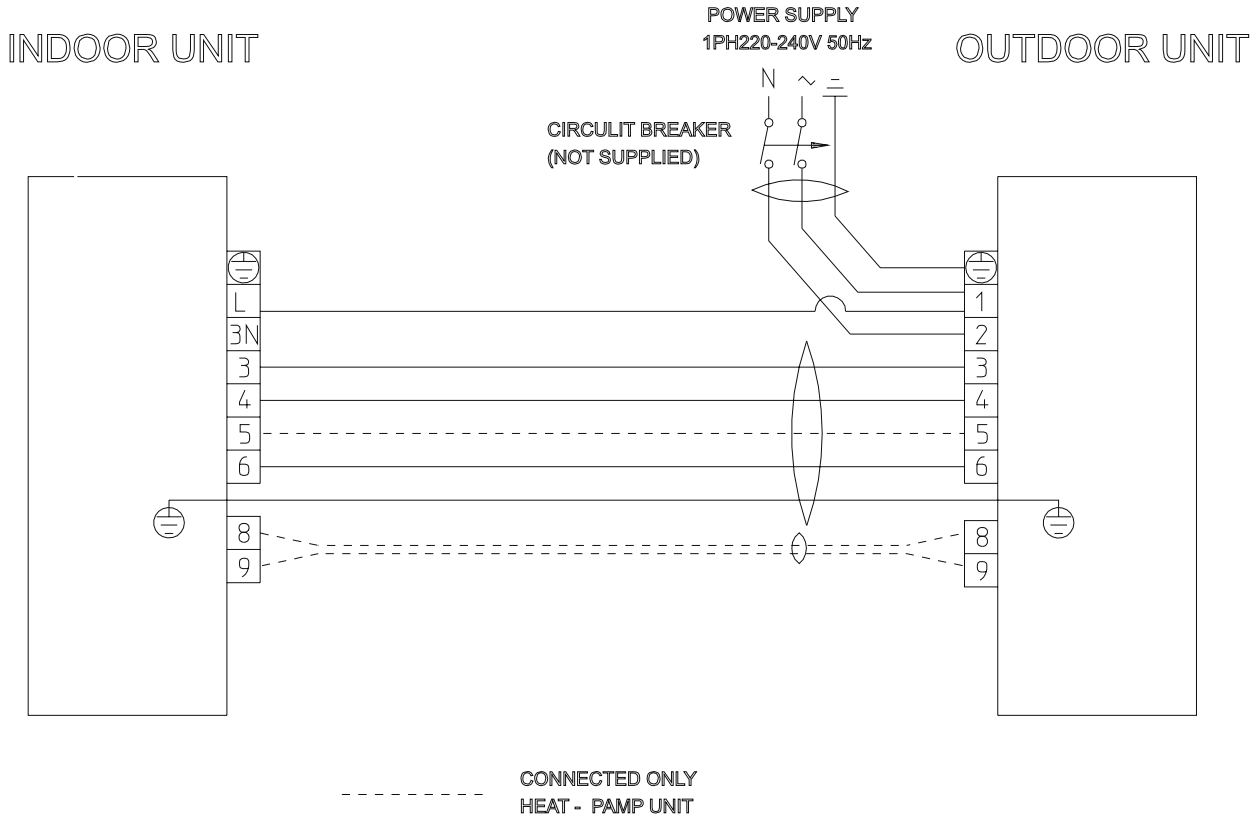

CAT N° 435761 REV. 01
ATTENTION ! FOR INDOOR UNIT ELECTRICAL WIRING
REFER TO INDOOR UNIT DIAGRAM
LEGEND:
Y/G - YELLOW/GREEN
BRN - BROWN
BLK - BLACK
BLU - BLUE
VIO - VIOLETTE
WHT - WHITE
ORN - ORANGE
CAP 1 - FAN 1 CAPACITOR
PRC - 3PH PROTECTOR
OCT - OUTDOOR COIL THERMISTOR
CH - CRANCKCASE HEATER
------- OPTIONAL
RV - REVERCING VALVE
ASK - ALL SEASON KIT
COMPRESSOR
FAN MOTOR
CAP 1
OCT IN
FOR HEAT-PUMP ONLY.
RV
3PH RELAY
IMPORTANT BEFORE CONNECTING THE PRC, REMOVE THE WIRE JP1 BETWEEN 2 TABs AND CONNECT PRC ACCORDINGLY
IMPORTANT BEFORE CONNECTING THE ALL SEASON KIT, REMOVE THE WIRE JP2 BETWEEN 2 TABs
ALL SEASON KIT
POWER SUPPLY: (BY INSTALLER)
3PH ~ 400V 50Hz
5X1.5 ø FOR UNITS UP TO 7KW CAPACITY
5X2.5 ø FOR UNITS OVER 7KW CAPACITY
CABLES BETWEEN INDOOR AND OUTDOOR UNIT:
A. 8x1.5 ø
B. 2x0.5 ø
L3 L2 L1 N
POWER SUPLLY
HEATER
(L3) (L2)
TO INDOOR UNIT
CH
OCT OUT (8, 9)
* INSTALLER
IN CASE OF 'ASK KIT' CONNECTION TO THE UNIT
DO NOT CONNECT WIRE BETWEEN UNITS IN CONNECTION '6'

8. ELECTRICAL CONNECTIONS

8.1 PXD 9, 12, 15, 18, 24

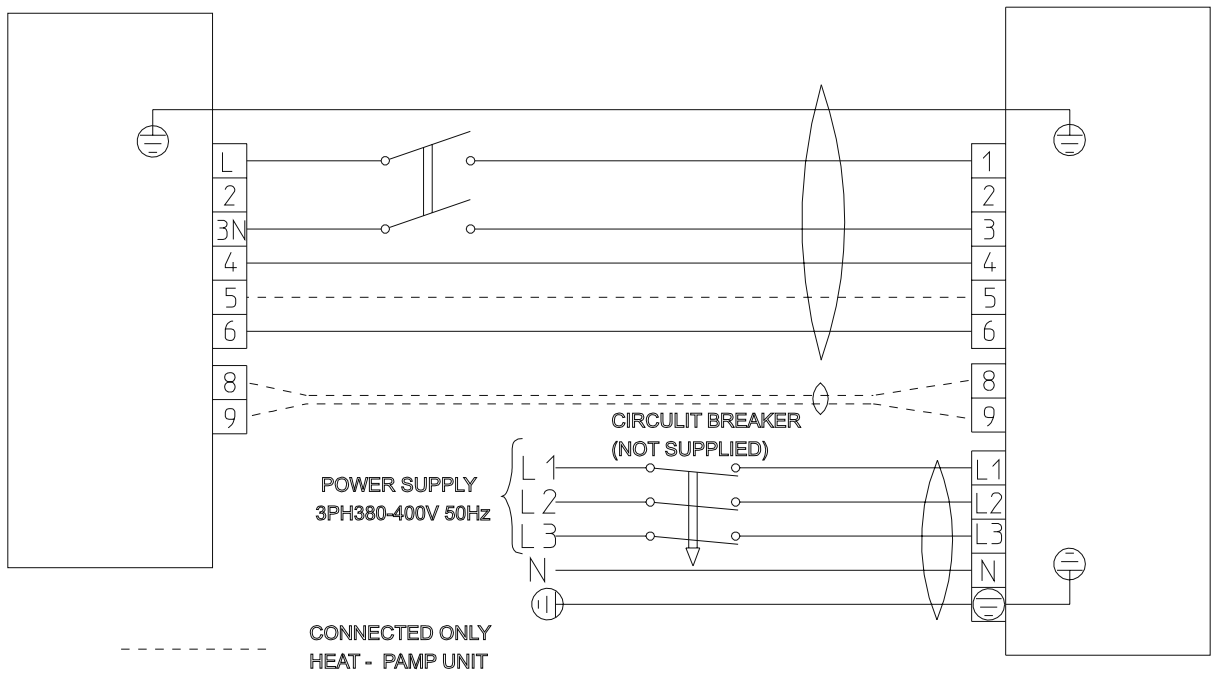


8.2 PXD 18, 24,30 (Power Supply to Outdoor)



8.3 PX 18, 24, 30 3PH

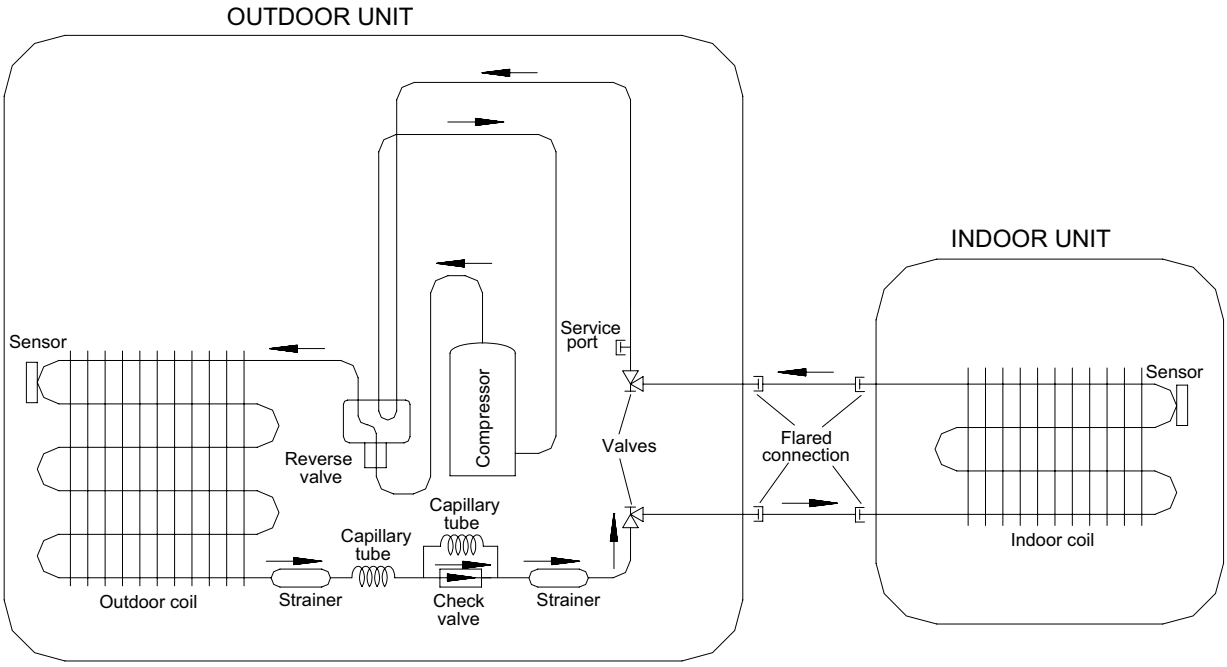
INDOOR UNIT OUTDOOR UNIT



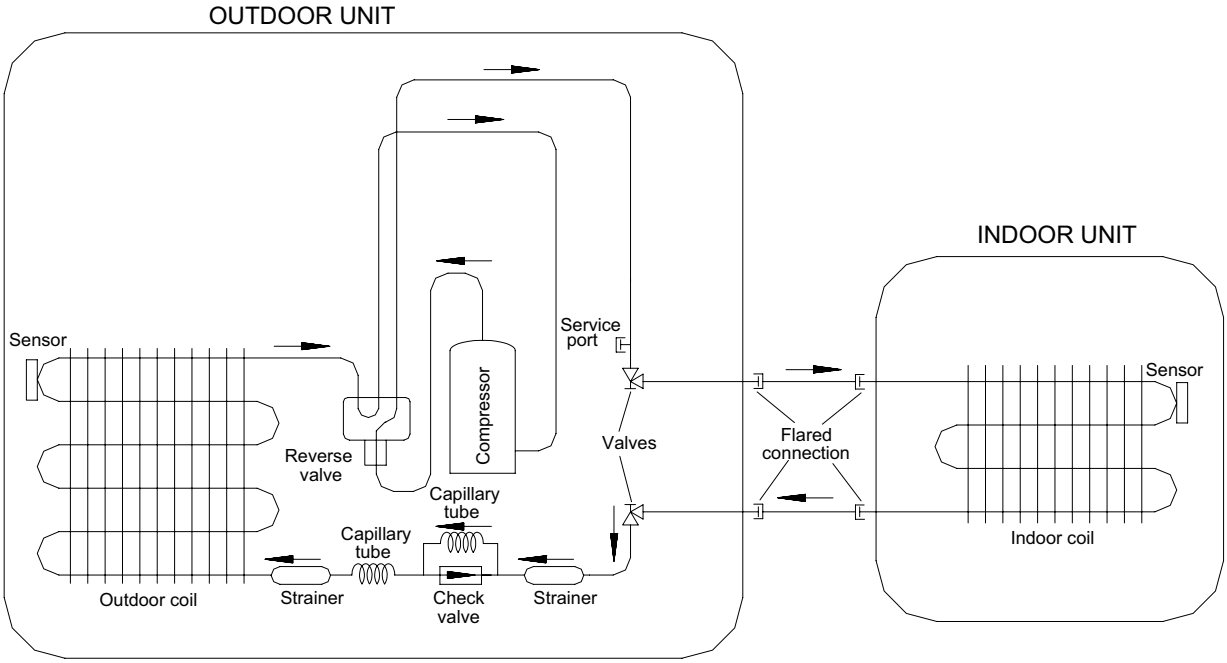
9. REFRIGERATION DIAGRAMS

9.1 Heat Pump Models

9.1.1 PXD 9, 12, 15, 18 R410A

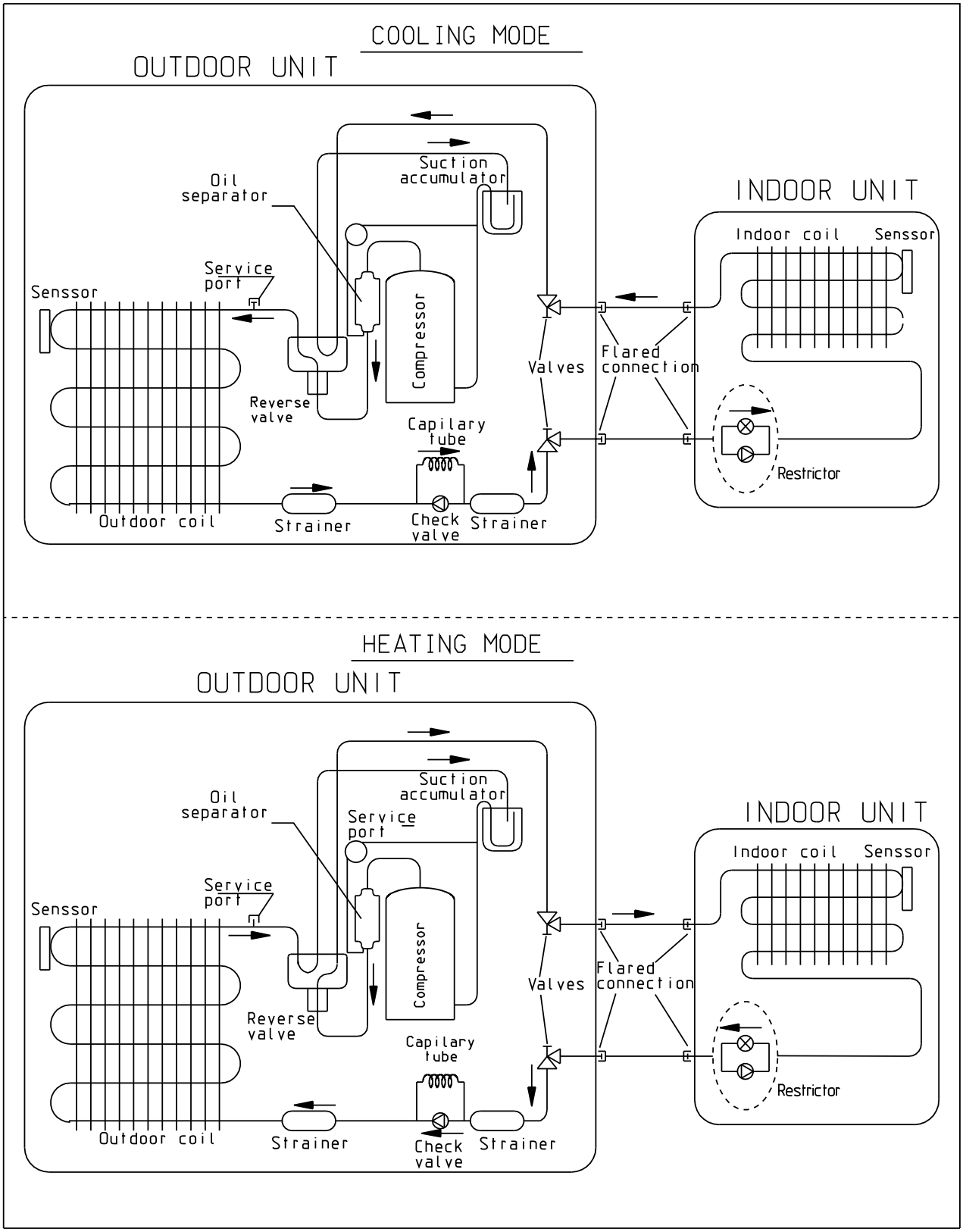


COOLING MODE

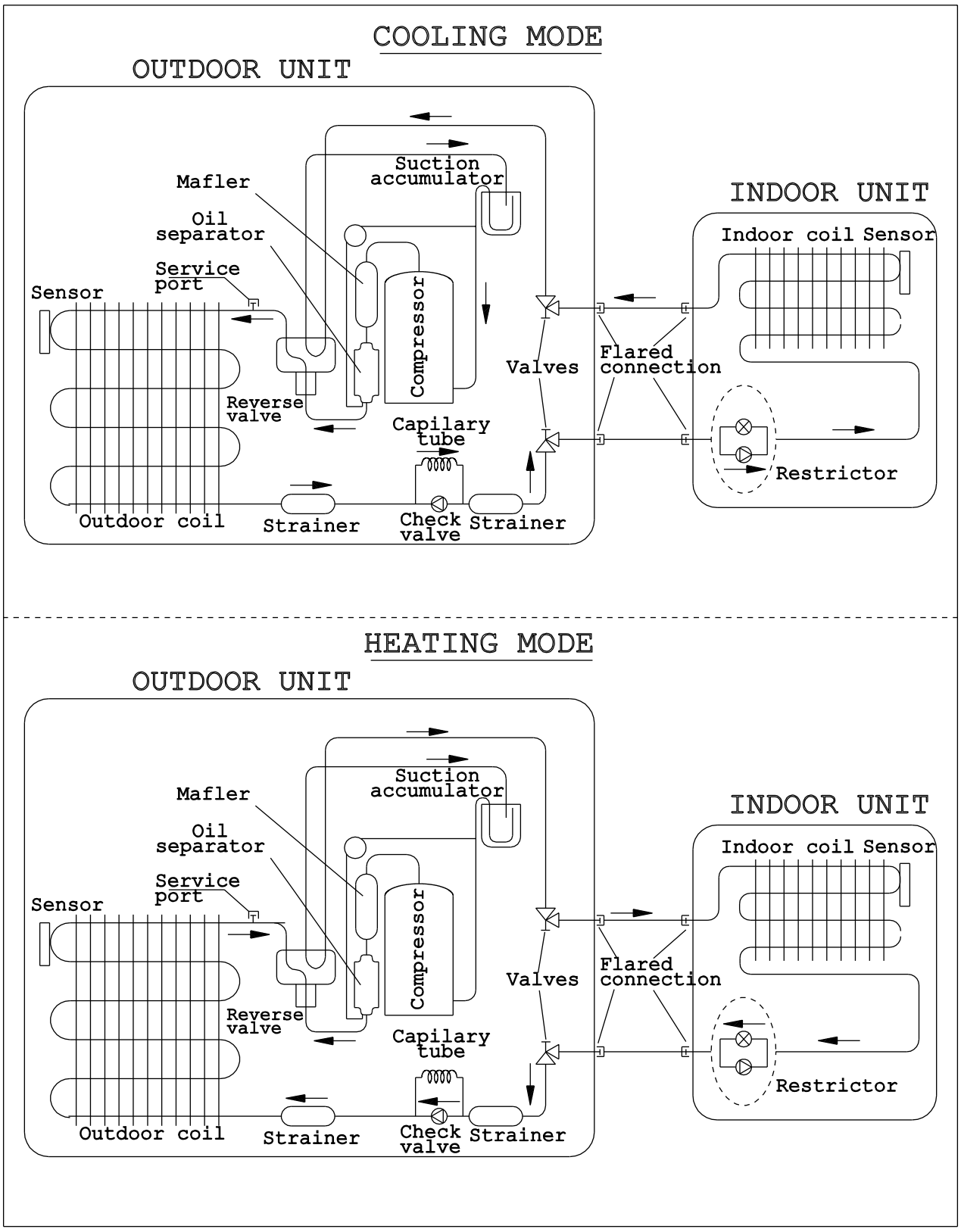


HEATING MODE

9.1.2 PXD 24 R410A

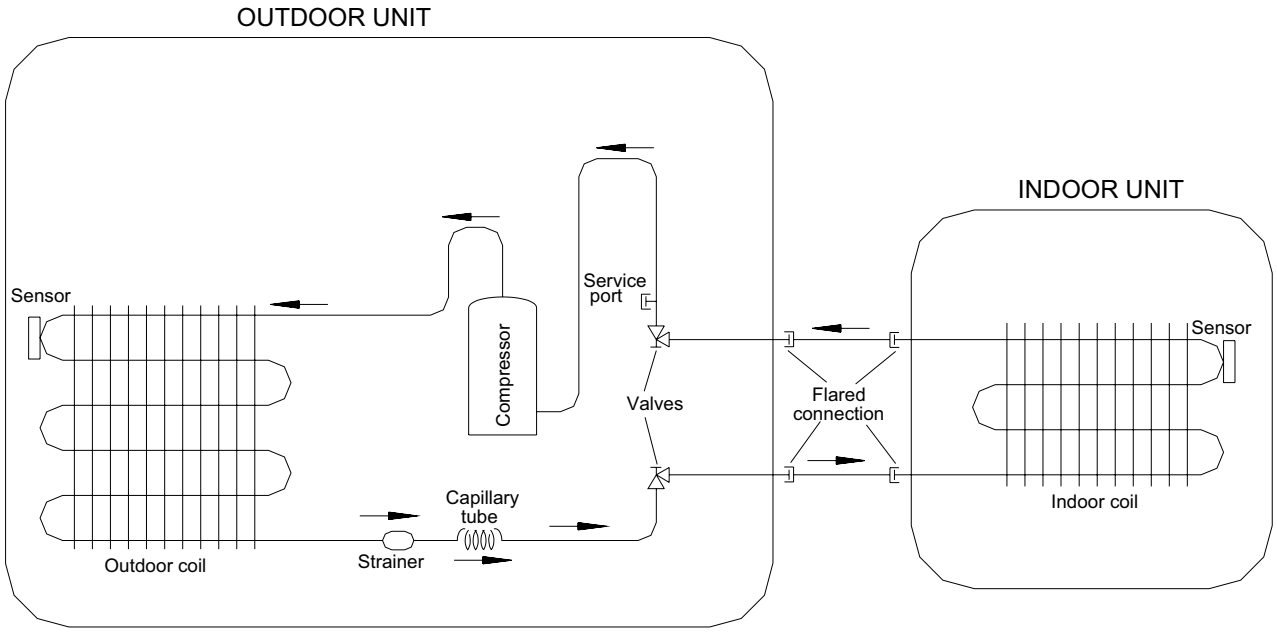


9.1.3 PXD 30 R410A

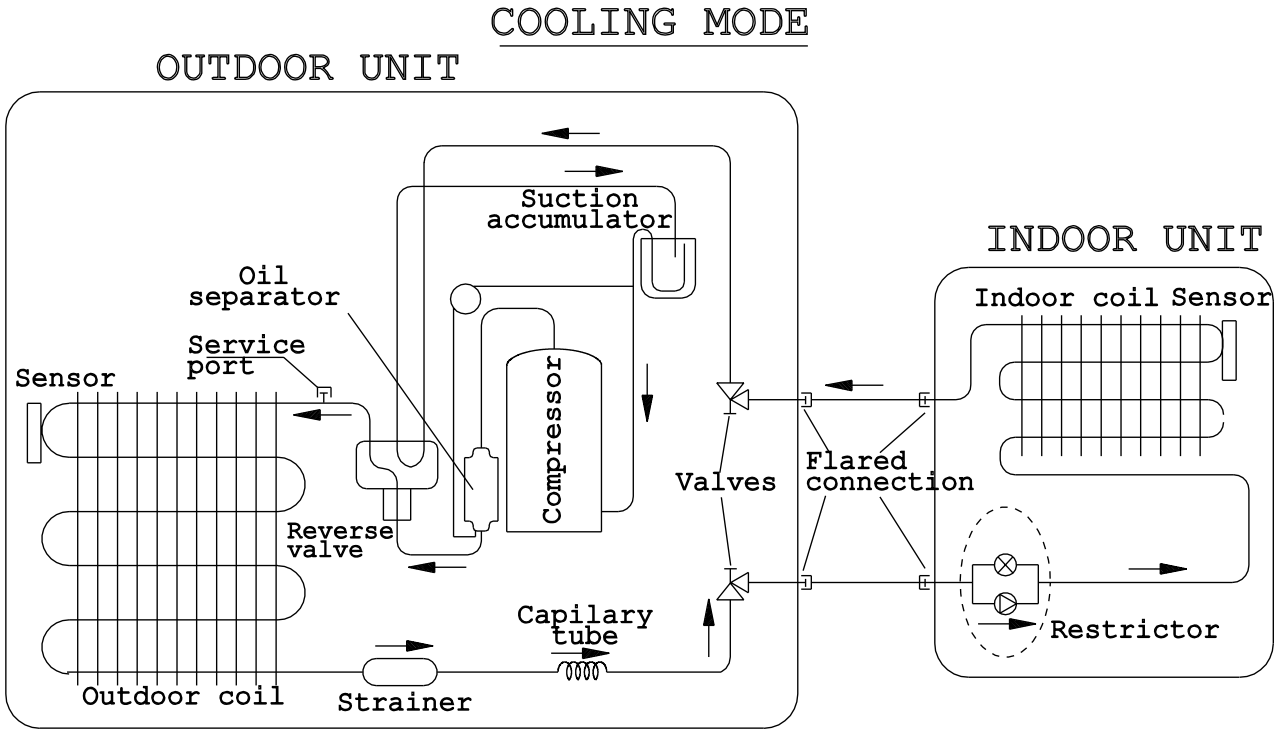


9.2 Cooling Only Models

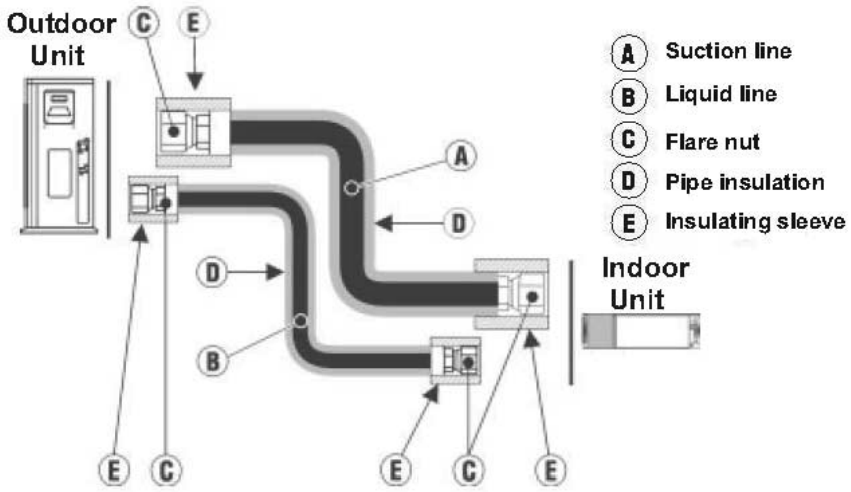
9.2.1 PXD 9, 11, 15, 18

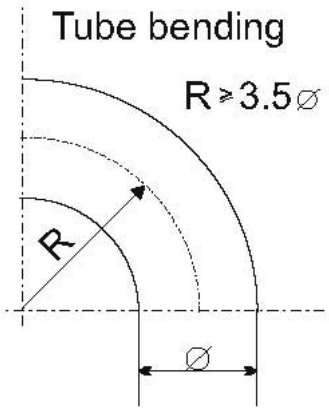


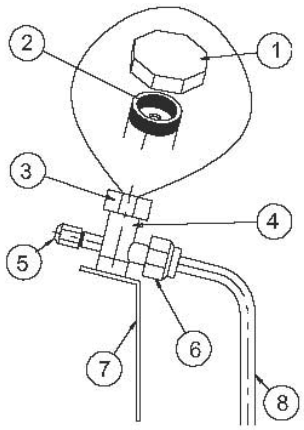
9.2.2 PXD 24, 30



10. TUBING CONNECTIONS



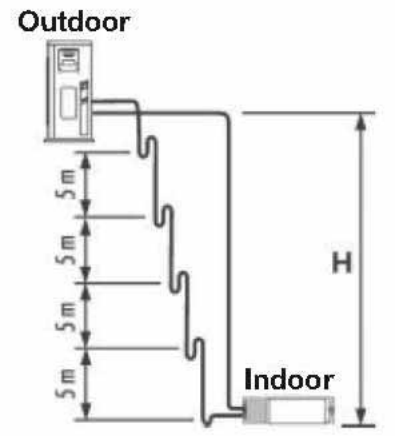




TUBE (Inch) / TORQUE (Nm)	1/4"	3/8"	1/2"	5/8"	3/4"
Flare Nuts	11-13	40-45	60-65	70-75	80-85
Valve Cap	13-20	13-20	18-25	18-25	40-50
Service Port Cap	11-13	11-13	11-13	11-13	11-13

1. Valve Protection Cap-end
2. Refrigerant Valve Port (use Allen wrench to open/close)
3. Valve Protection Cap
4. Refrigerant Valve
5. Service Port Cap
6. Flare Nut
7. Unit Back Side
8. Copper Tube

When the outdoor unit is installed above the indoor unit an oil trap is required every 5m along the suction line at the lowest point of the riser. Incase the indoor unit is installed above the outdoor, no trap is required.



11. CONTROL SYSTEM

11.1 Electronic Control

11.1.1 Introduction

The electronic control information is designed for service applications, and is common to the following groups of air-conditioners:

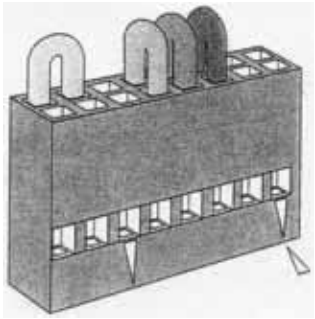
- **ST/RC** group -Cooling only / cooling and heating by heat pump.
- **SH group** -Cooling and heating by heat pump and supplementary heater.
- **RH group** -Cooling, heating by heaters only.

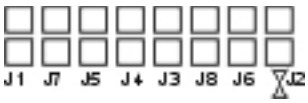
11.1.2 Model Plug Settings

Before installation, make sure to set the model plug conforming to the suitable group.

GROUP	**J6** Setting	**J2** Setting
ST / RC	Open	Open
SH	Closed	Open
RH	Closed	Closed

Model Plug





Group	Location of the jumpers
ST	
RC	
RH	
SH	

11.1.3 Remote Control DIP Switch Settings

SETTING SWITCH STATUS				DEFINITION	
SW. NO. 1	SW. NO. 2	SW. NO. 3	SW. NO. 4	RC3	RC4
OFF	OFF	--	--	RC-ALL MODES OF OPERATION	
ON	OFF	--	--	STD-COOL, FAN, DRY, ACTIVE	
OFF	ON	--	--	HEAT-COOL, FAN, DRY, ACTIVE	
ON	ON	--	--	AUTO FAN (AF)	
--	--	OFF	--	TEMP. DISPLAY IN °C DEGREES	VERTICAL SWING ONLY
--	--	ON	--	TEMP. DISPLAY IN °F DEGREES	HORIZONTAL & VERTICAL SWING FUNCTIONS TOGETHER
--	--	--	OFF	TIMER & CLOCK 12H AM, PM	DISABLE LCD & KEY ILLUMINATION
--	--	--	ON	TIMER & CLOCK 24H	ENABLE LCD & KEY ILLUMINATION

Reset operation **-** Press the 4 buttons simultaneously: “CLEAR “, “SET”, "HR +", ”HR -” for 5 seconds

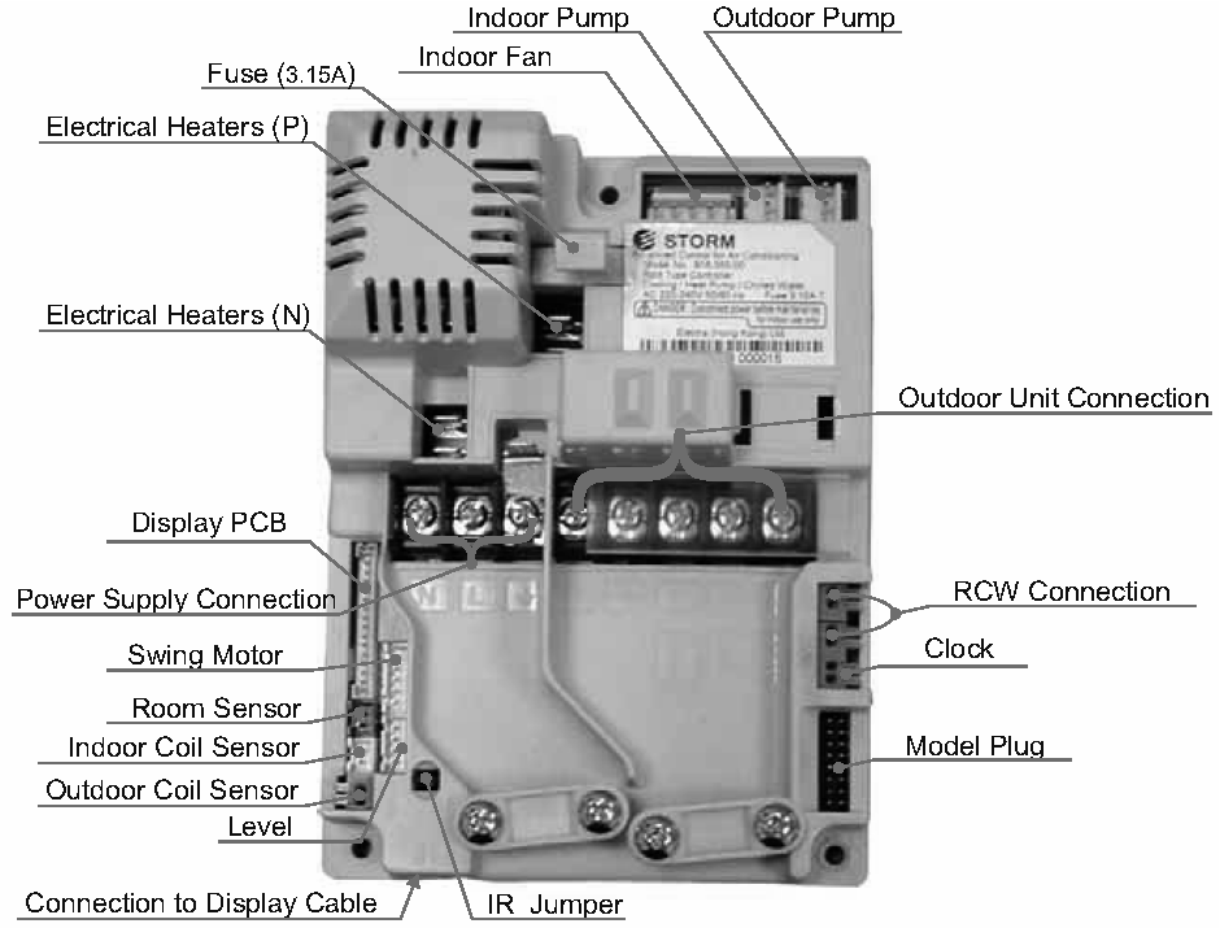
LEGEND

SW1, SW2 - Selection of RC/ST
SW3 – Selection of Display °C or °F in RC3 or swing function in RC4
SW4 – Selection of Time Display 12H AM/PM or 24H in RC3 or illumination in RC4
OFF = 0
ON = 1

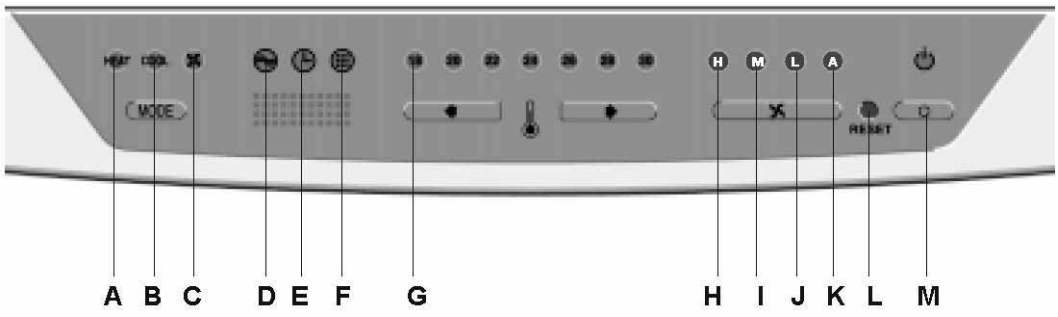
NOTE

After setting the DIP switches perform reset operation.

11.1.4 Main PCB Controller



11.1.5 Display Board :LEXAN



11.1.6 Display Board : Assembly

11.1.7 Legend :

A) Heating LED

B) Cooling LED

C) Fan LED

D) Operation LED

E) Timer LED

F) Filter LED

G) Temp' Set Point Indication

H) Fan Speed H,(High) **I,**(Medium) **J,**(Low) **K**,(AUTO)

L) Reset

M) STB'Y LED

11.2 Control Function

11.2.1 Abbreviations

AC - Alternate Current
A/C - Air-Conditioner
ANY - ON or OFF status
CLOCK - ON/OFF Operation Input, (dry contact)
COMP - Compressor
CPU - Central Processing Unit
CTV - Compensation Temperature Value
HE - Heating Element
HPC - High Pressure Control
H/W - Hardware
ICP - Indoor Condensation Pump
ICT - Indoor Coil Temperature (RT2) sensor
IF, IFAN - Indoor Fan
IR - Infrared
LEVEL1 - Normal Water Level
LEVEL2/3 - Medium/High Waterlevel
LEVEL4 - Overflow Level
Max - Maximum
Min - Minimum
min - Minute (time)
NA - Not Applicable
OCP - Outdoor Condensation Pump
OCT - Outdoor Coil Temperature (RT3) sensor
OF, OFAN - Outdoor Fan
OPER - Operate
Para. - Paragraph
RAT - Return Air Temperature (RT1) sensor
RC - Reverse Cycle (Heat Pump)
R/C - Remote Control
RCT - Remote Control Temperature
RH - Resistance Heater
RT - Room Temperature (i.e. RCT in IFEEL mode, RAT otherwise)
RV - Reversing Valve
SB, STBY - Stand-By
sec - Second (time)
Sect - Section
SH - Supplementary Heater
SPT - Set Point Temperature
ST - Standard (Model with Cooling Only)
S/W - Software
TEMP - Temperature
W/O - Without
ΔT - The difference between SPT and RT.
in Heat Mode: $\Delta T = SPT - RT$
in Cool/Dry/Fan Mode: $\Delta T = RT - SPT$

11.3 General Functions

11.3.1 COMP Operation

a. For each Mode including POWER OFF & SB, a Min time delay of 3 min before COMP restarting, excluding DEICING Mode (see para. 14.12.2).

b. The Min operation time of COMP under different operating conditions is:

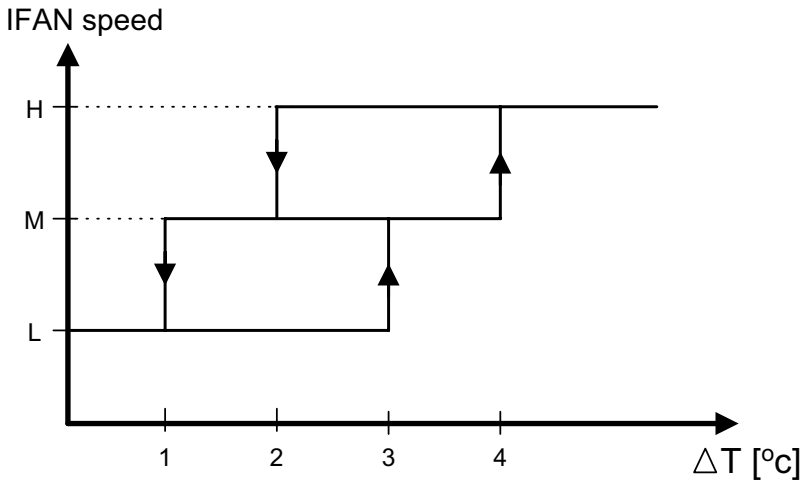
Operation Mode	Min Operation Time of COMP
Heat, Cool, HP protection or Auto Modes	3 min.
Fan, Dry, Overflow, Protection Modes, or Mode Change	Ignored

11.3.2 IFAN operation

a. Min time interval between IFAN speed change in AUTOFAN Mode is 30 sec.

b. Min time interval between IFAN speed change in H/M/L Mode is 1 sec.

c. IFAN speed in Heat/Cool AUTOFAN Mode is determined according to the following chart:



Where in Heat Mode: $\Delta T = SPT - RT$
in Cool Mode: $\Delta T = RT - SPT$

11.3.3 OFAN Operation

Min time interval between OFAN ON/OFF state changes is 30 sec.

11.3.4 HE Operation

a. Min Heaters ON or OFF time is 30 sec.

b. Heaters can never be in operation while IFAN is OFF.

c. In RH group, HE-1 and HE-2 will be activated only when COMP is not operating, except in Dry Mode.

11.3.5 Protections

a. High pressure protection is applicable to all operating modes.

b. Deicing control is valid in Heat and Auto Heat Modes only.

c. Defrosting control is valid in Dry, Cool, and Auto Cool Modes.

11.3.6 Thermistors Operation

a. Return air Temp. is detected by RAT in normal Mode, or by RCT (R/C sensor) in I-FEEL Mode.

b. Indoor Coil Temp. is detected by ICT.

c. Outdoor Coil Temp. is detected by OCT.

d. Definition of thermistor faults:

1) Thermistor is disconnected - the thermistor reading is below – 30^{O}C.

2) Thermistor is shorted - the thermistor reading is above 75^{O}C.

3) Thermistor Temp reading doesn't change -

a) This test is performed only once after a unit is switched from OFF/STBY to operation. At the first occurrence of 10 min continuous COMP operation, the current ICT are compared with those when the COMP was switched from OFF to ON 10 min before. If the ΔT is less than 3^{O}C, the thermistor is regarded as defective.

b) The ICT no-change error can be disabled together by connecting a 4.7kΩ resistor (5%) to the ICT connector. These resistors are equivalent to a thermistor 48+/-1^{O}C.

e. Cases for disabling ICT thermistor disconnected detection:

1) The detection of thermistor faults a. and b. above is disabled when Deicer Protection is started. The detection will be enabled again only after (1) the deicing is completed, and (2) COMP has been restarted and operated for 30 sec.

2) When all the following conditions are fulfilled:

a) 4.7kΩ resistor is connected to the OCT.

b) IFAN is OFF.

c) Compressor is ON.

d) ICT < -30 (disconnected).

11.3.7 RV Fault

This test is applied only in compressor units where 4.7kΩ resistor is not connected to the OCT.
The test is performed every time the unit is switched from OFF/STBY to OPER in Heat mode or changes operation mode from COOL/DRY to HEAT or (this applies also in AUTO COOL/HEAT mode).
If ICT is lower than 35°C at the time of mode change, then at the first occurrence of 15 min continuous COMP operation, ICT is compared with ICT reading when the COMP was switched from OFF to ON 15 min before. RV fault is defined when ICT decreases more than 5°C.
In this case, the COMP will stop and the SB LED will blink. The fault is reset after switching to SB or after mode change.

11.3.8 General Features

a. Allowed (control target) range for RAT is SPT +/-1ºC.

b. Whenever the unit is changed from COOL/DRY/STBY mode to HEAT mode or vice versa, the procedures below are followed:
Stop COMP for 3 min → Change RV state → Start COMP if necessary.

11.4 Cooling Mode

11.4.1 Cooling Mode – General

a. Mode Definition

Mode: COOL, AUTO (at Cooling)

Temp: Selected desired temperature.

Fan: HIGH, MED, LOW, AUTO.

Timer: Any

I-FEEL: ON or OFF

b. Room Temperature, RT, is detected by:

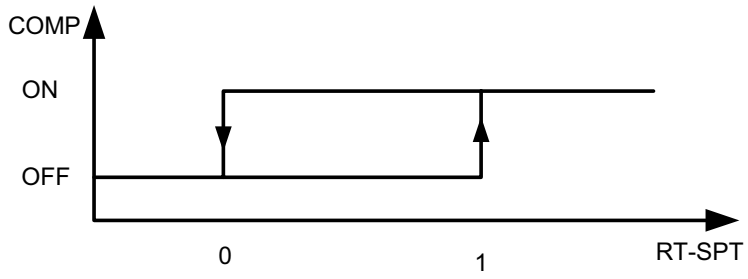
- RAT in normal operation, or
- RCT (R/C sensor) in I-FEEL mode.

c. Indoor Coil Temp is detected by ICT.

d. Outdoor Coil Temp is detected by OCT.

11.4.2 Control Functions

a. COMP Operation



b. OFAN Operation

- In normal operation OFAN operates together with the COMP.

c. IFAN Operation

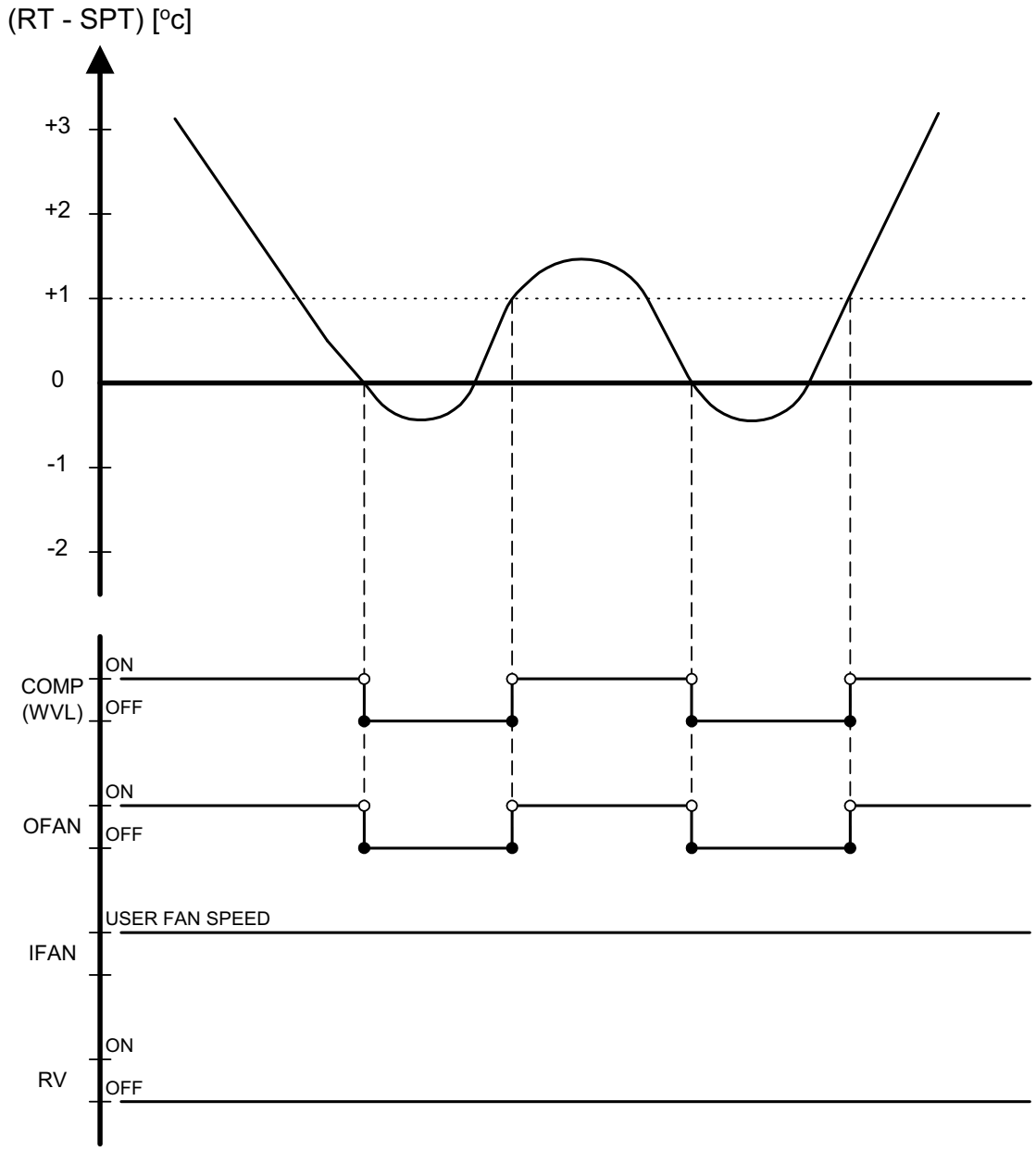
- IFAN will operate in ANY speed regardless the ICT or COMP state.
- IFAN speed will be determined according to user selection or AUTO-FAN logic

d. RV and HEATERS outputs

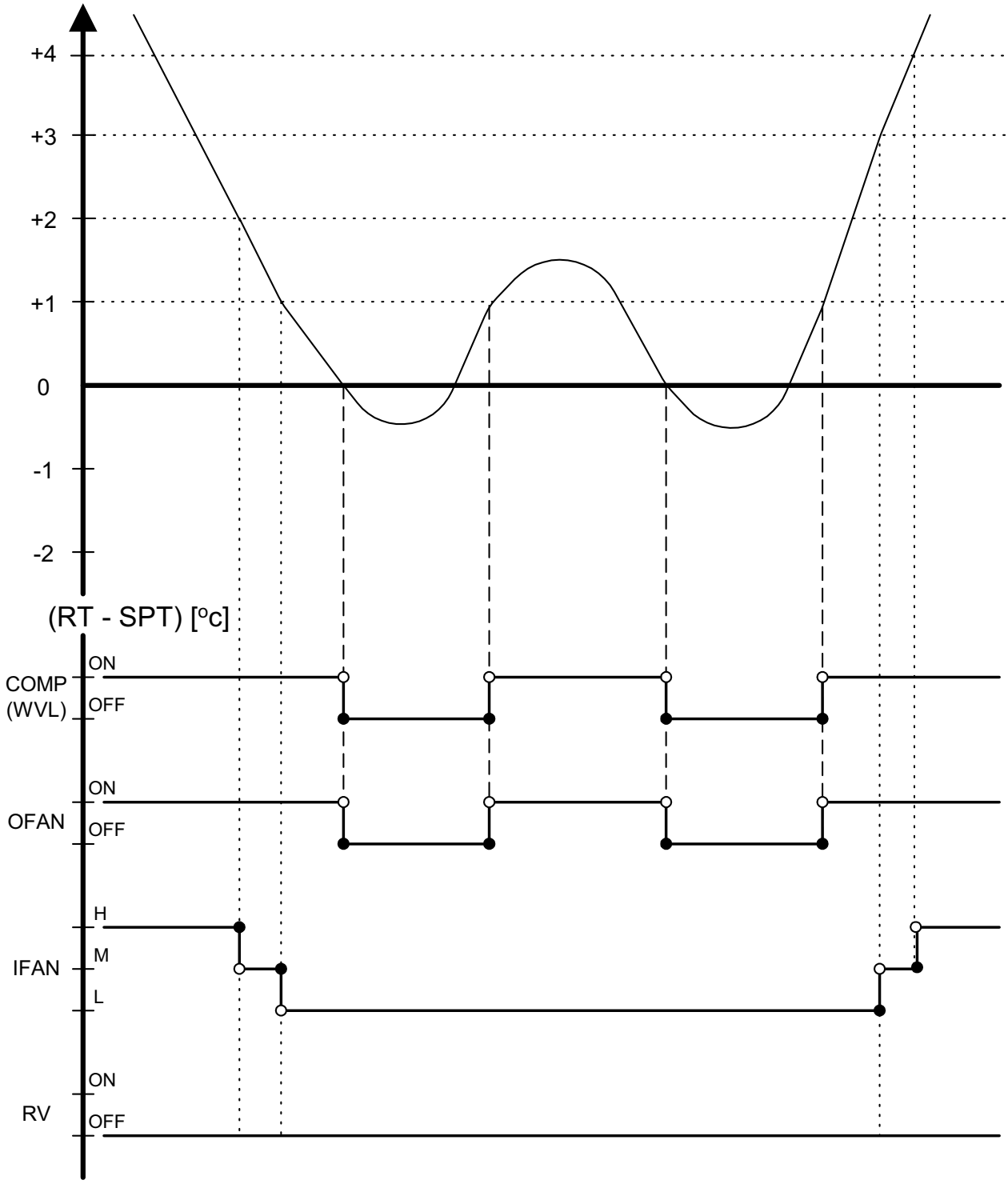
- RV and HEATERS are in OFF state in COOL mode.

11.4.3 Sequence Diagrams

a. Maintaining room temp at desired level by comparing RT and SPT with user defined IFAN speed.



b. Maintaining room temp at desired level by comparing RT and SPT with AUTO-IFAN.



11.5 Heating Mode

11.5.1 Heating Mode - General

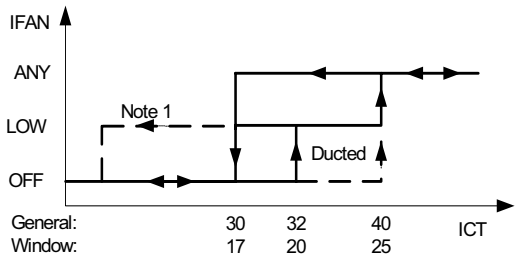
a. Compensation Procedure
When I-FEEL is OFF during HEAT mode: RT= RAT – CTV.
When I-FEEL is ON during HEAT mode: RT= RCT.

Type of Indoor	CTV
Wall Mounted	+3 °C
Mobiles / Floor Ceiling	+0 °C
Square /Window	+2 °C
Ducted	+4 °C
Cassettes	+4 °C

No compensation will be activated in Forced operation modes

b. IFAN operation rules for RC and SH groups:

1) As a general rule for **RC and SH groups,** IFAN will be switched ON according to the following graph:



NOTE 1

When COMP is ON (except WAX Model), IFAN will change from LOW to OFF either when:

a) ICT<28 and IFAN is on for 5 min or longer.

Or,

b) ICT<20

NOTE 2

When ICT is faulty:
When the compressor switches from OFF to ON (excluding deicing), IFAN will be on in ANY speed.
When the compressor switches from ON to OFF, the IFAN will change to LOW speed for 30 seconds and then it will be off.

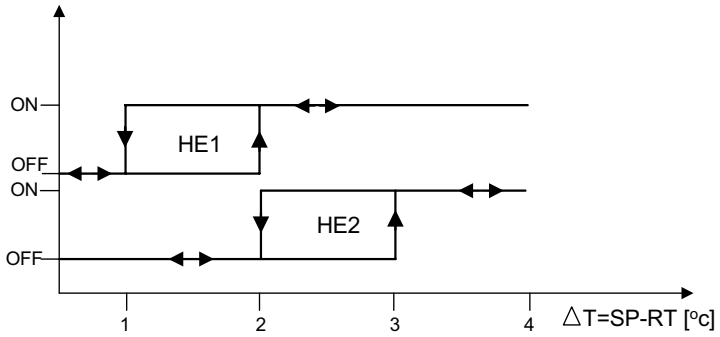
2) In SH or RC group, IFAN will operate for Min 30 sec according to 1) above after HEs are turned off, where in a case it has to be OFF, it will be forced to LOW speed.

c. IFAN operation rules for RH group

1) In RH group, IFAN starts when HE starts. When HE switches to OFF, IFAN switches to LOW for 30 sec and then stops.

d. Heaters operation rules for RC and SH groups:

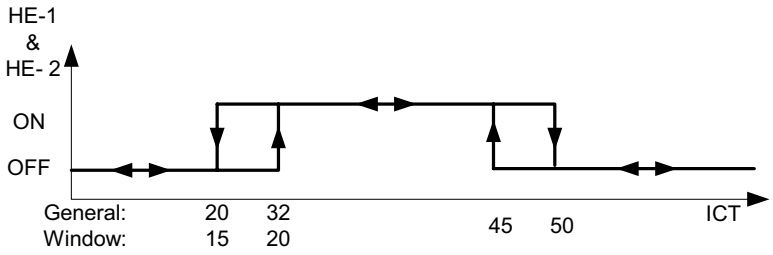
1) For both RC and SH groups, Heaters versus ΔT is as follows:



2) Operation rules for Heaters in RC group:

a) Heaters can be enabled only if IFAN is ON.

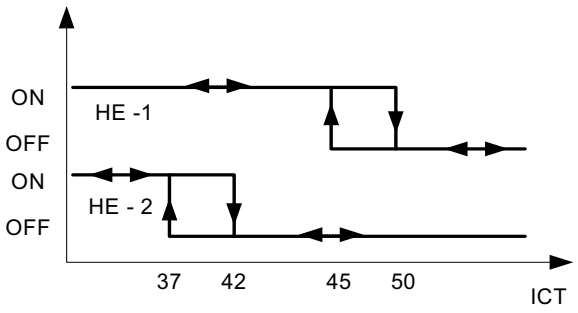
b) Heaters will operate according to ΔT **and** the following graph:



3) Rules for Heaters operation in SH group:

a) When heaters are to be ON and IFAN is to be OFF according to d. 1) above, IFAN will be forced to LOW speed.

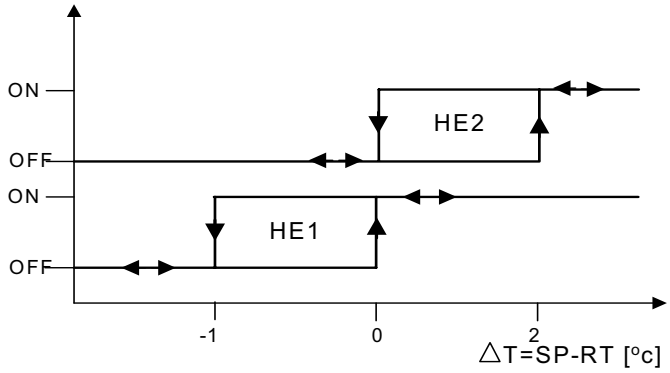
b) Heaters will operate according to ΔT and the following graph:



4) For both RC and SH groups, excluding deicing, HE1 and HE2 can be ON only when the compressor is ON.

e. Heaters operation rules for RH groups:

1) In RH group, HE operation is according to the difference between RAT and SPT.



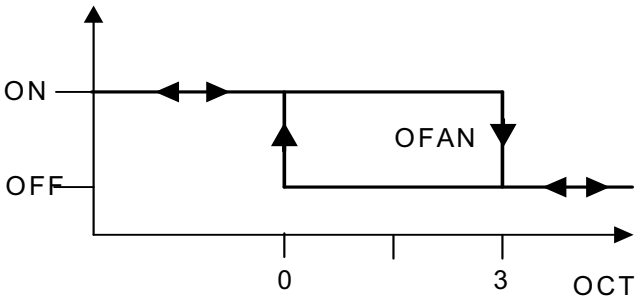
f. OFAN Operation for RC and SH groups

1) As a general rule for RC and SH groups, excluding protection modes, OFAN starts with the compressor.

2) When OFAN is ON it will operate according to the following conditions:

a) OFAN operates together with the compressor.

b) When $(RT \geq SPT - 2)\ and\ ICT \geq 50$ and the 4.7kΩ resistor is not connected to the OCT, OFAN will operate according to the following curve:



11.6 Heating, RC or SH Group

Mode: HEAT, AUTO (at heating)

Temp: Selected desired temperature

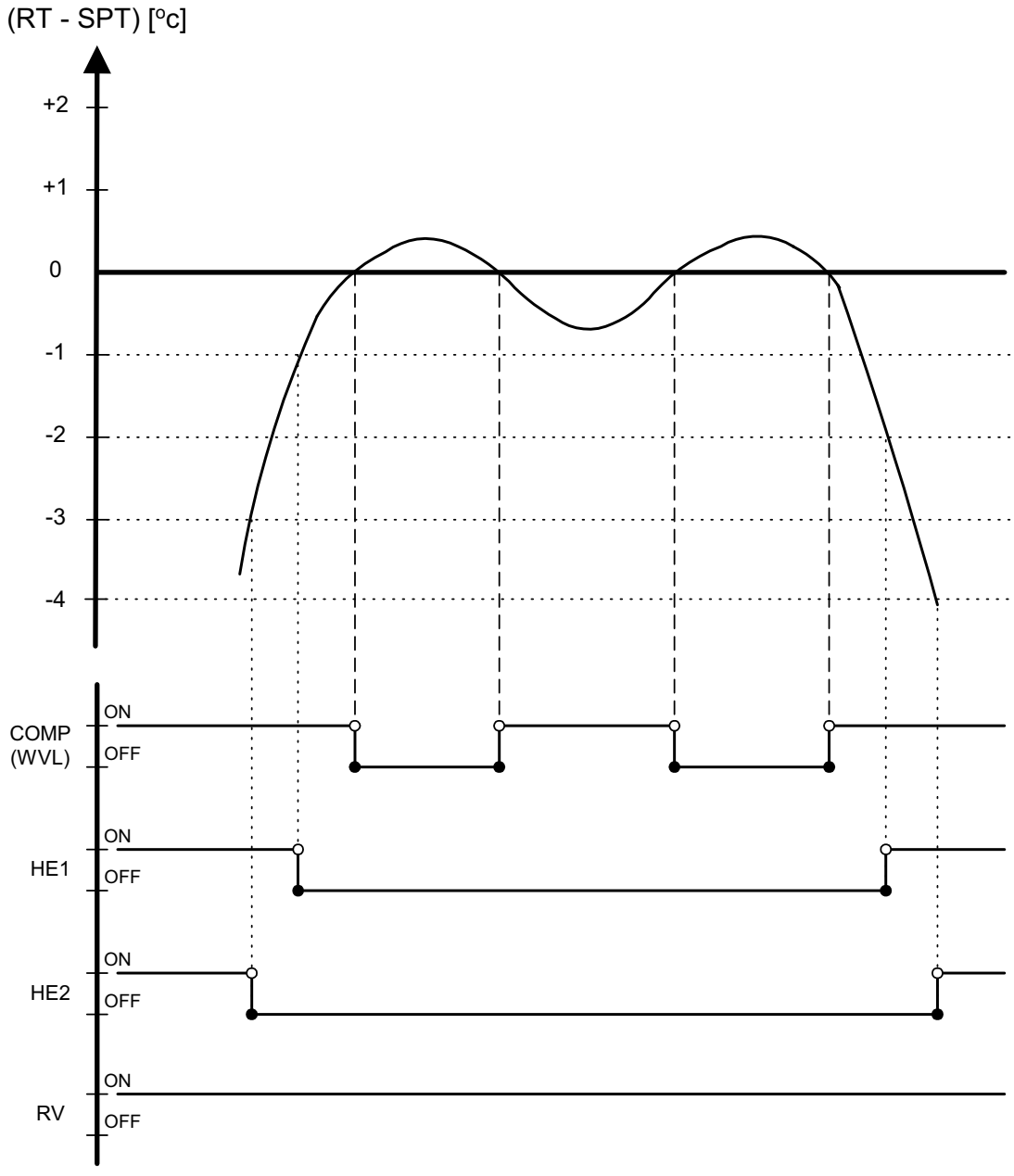
Fan: HIGH, MED, LOW

Timer: Any

I-FEEL: ON or OFF

11.6.1 Sequence Diagram

Maintains room temp. at desired level by comparing RAT or RCT to SPT.



11.7 Heating, RC or SH Group with Autofan

Mode: HEAT, AUTO (at heating)

Temp: Selected desired temperature

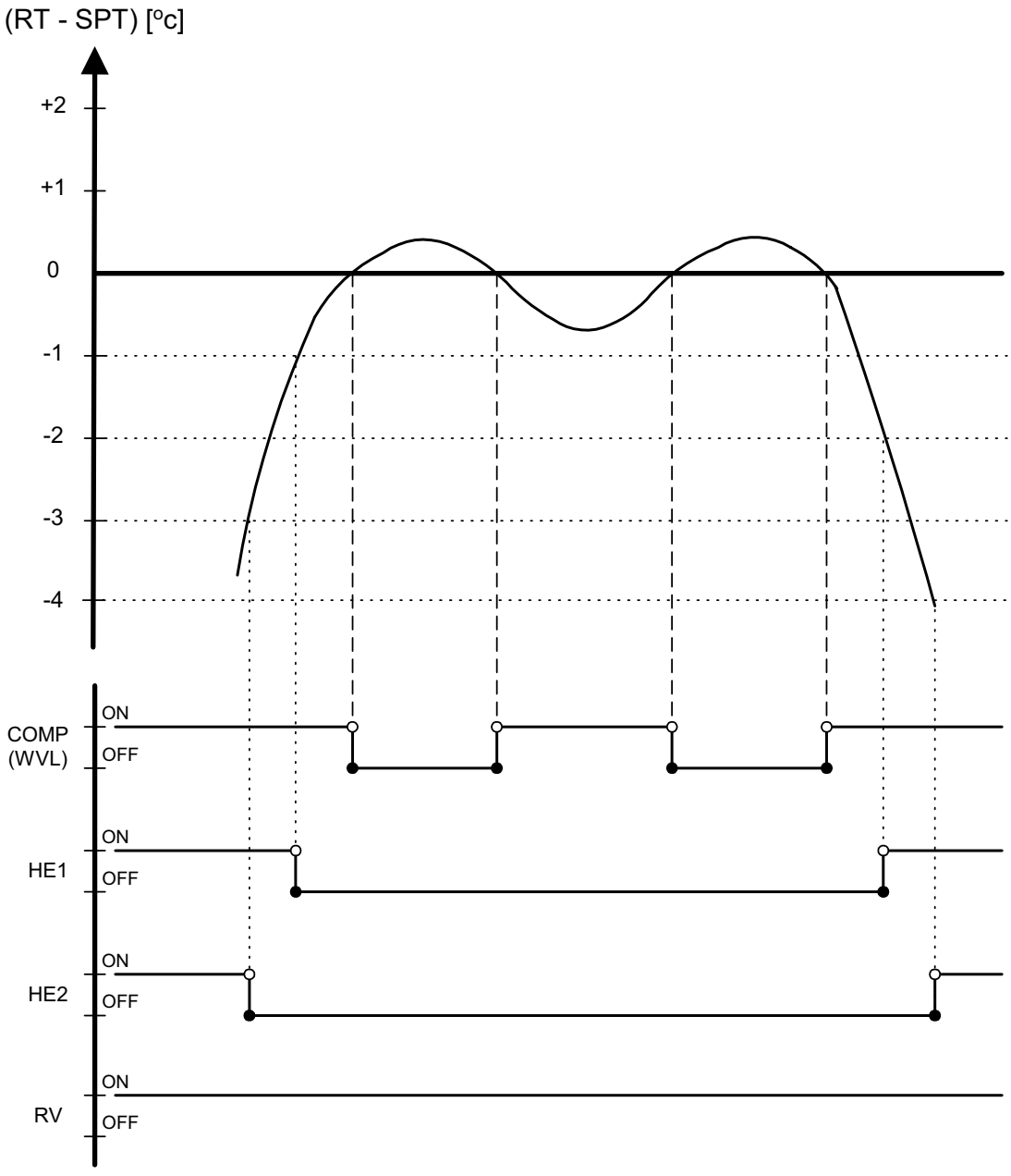
Fan: AUTO

Timer: Any

I-FEEL: ON or OFF

11.7.1 Sequence Diagram

Maintains room temp at desired level by controlling COMP, IFAN and OFAN.



11.8 Heating, RH Group

Mode: HEAT, AUTO (at Heating)

Temp: Selected desired temperature

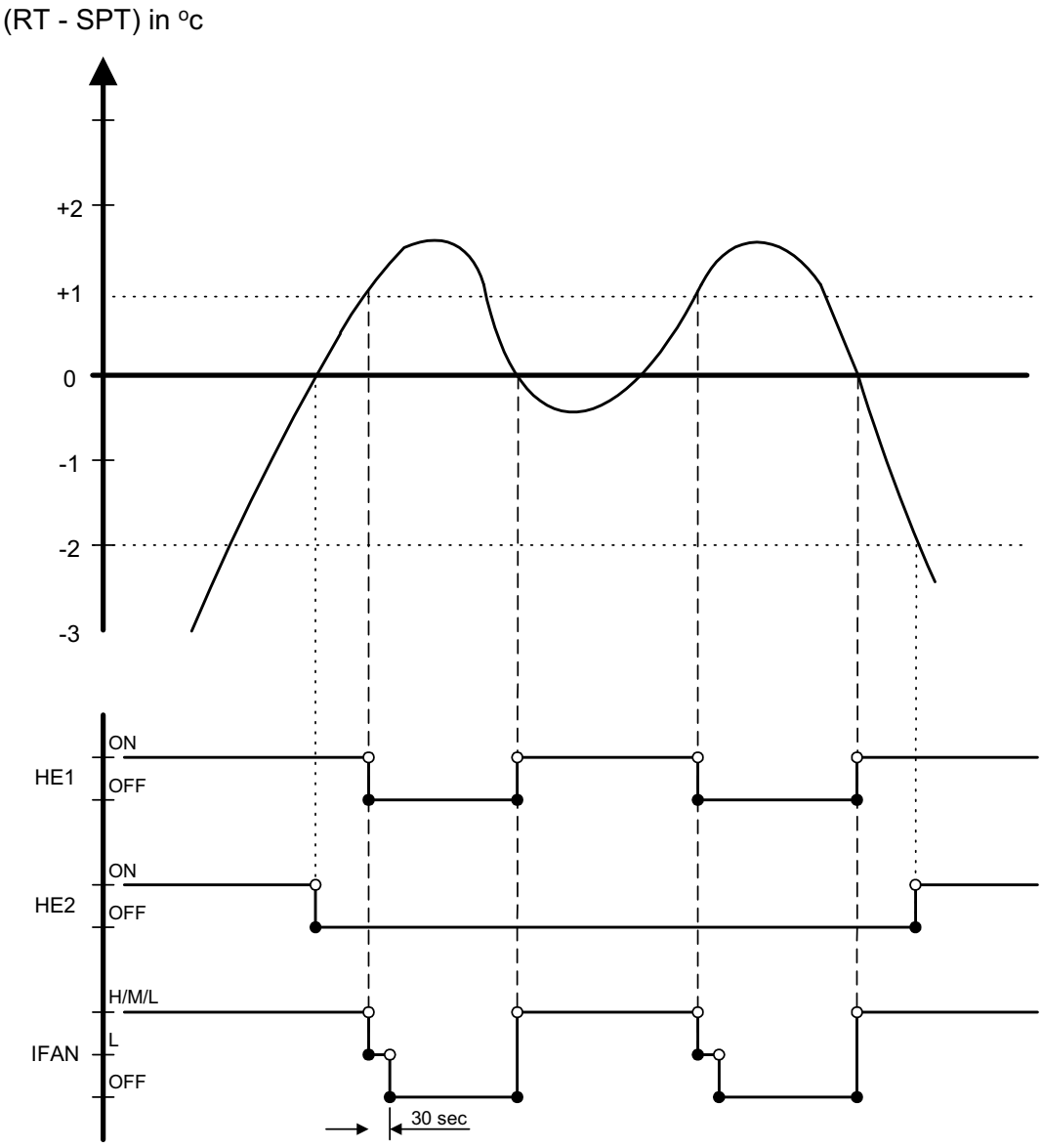
Fan: HIGH, MED, LOW

Timer: Any

I-FEEL: ON or OFF

11.8.1 Sequence Diagram

Maintains room temp at desired level by controlling Heating Elements: HE1 or HE2.



11.9 Heating, RH Group, with AUTOFAN

Mode: HEAT, AUTO (at Heating)

Temp: Selected desired temperature

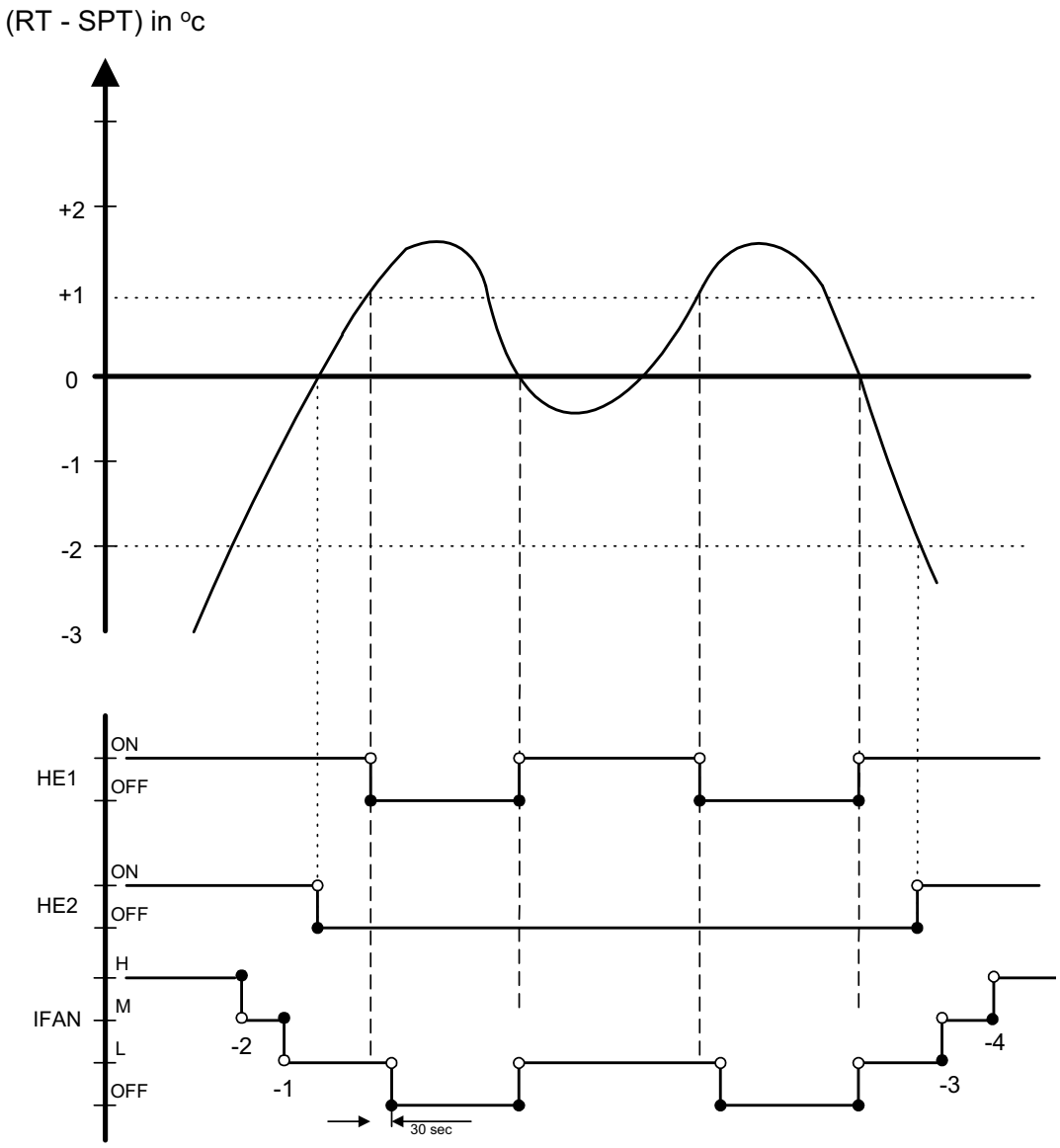
Fan: AUTO

Timer: Any

I-FEEL: ON or OFF

11.9.1 Sequence Diagram

Maintains room temp. at desired level by controlling the 2-Stage Electric Heaters.



11.10 Automatic Cooling or Heating

11.10.1 Automatic Cooling or Heating - General

The AUTO Mode is for models with compressor and the WVL-RH only. The WVL-ST, RC and SH units do not work in AUTO Mode.

a. Mode Definition

Mode: AUTO

Temp: Selected desired temperature

Fan: Any

Timer: Any

I-FEEL: ON or OFF

b. Switching-temperature between Cooling and Heating is SPT $\pm$ 3^{O}C.

c. When the AUTO Mode is started with SPT +/-0 ^{O}C, the unit will not select Auto Heat or Auto Cool mode immediately. Instead, the unit will be in a temporary FAN Mode with IFAN operating at low speed. The proper Auto Heat mode or Auto Cool will be started whenever the RT reaches SPT-1^{O}C or SPT+1^{O}C respectively.

d. For RC & SH units, Mode change between Auto Heat & Auto Cool Modes is possible only after the COMP has been OFF during the last T minutes.

Mode Change	Time, T
Auto Cool to Auto Heat	3 min
Auto Heat to Auto Cool	4 min

e. For RH and WVL-RH units, Mode change between Auto Heat & Auto Cool Modes is possible after the COMP/HEs have been OFF during the last T minutes.

Mode Change	Time, T
Auto Cool to Auto Heat	COMP off for 3 min
Auto Heat to Auto Cool	HEs off for 3 min

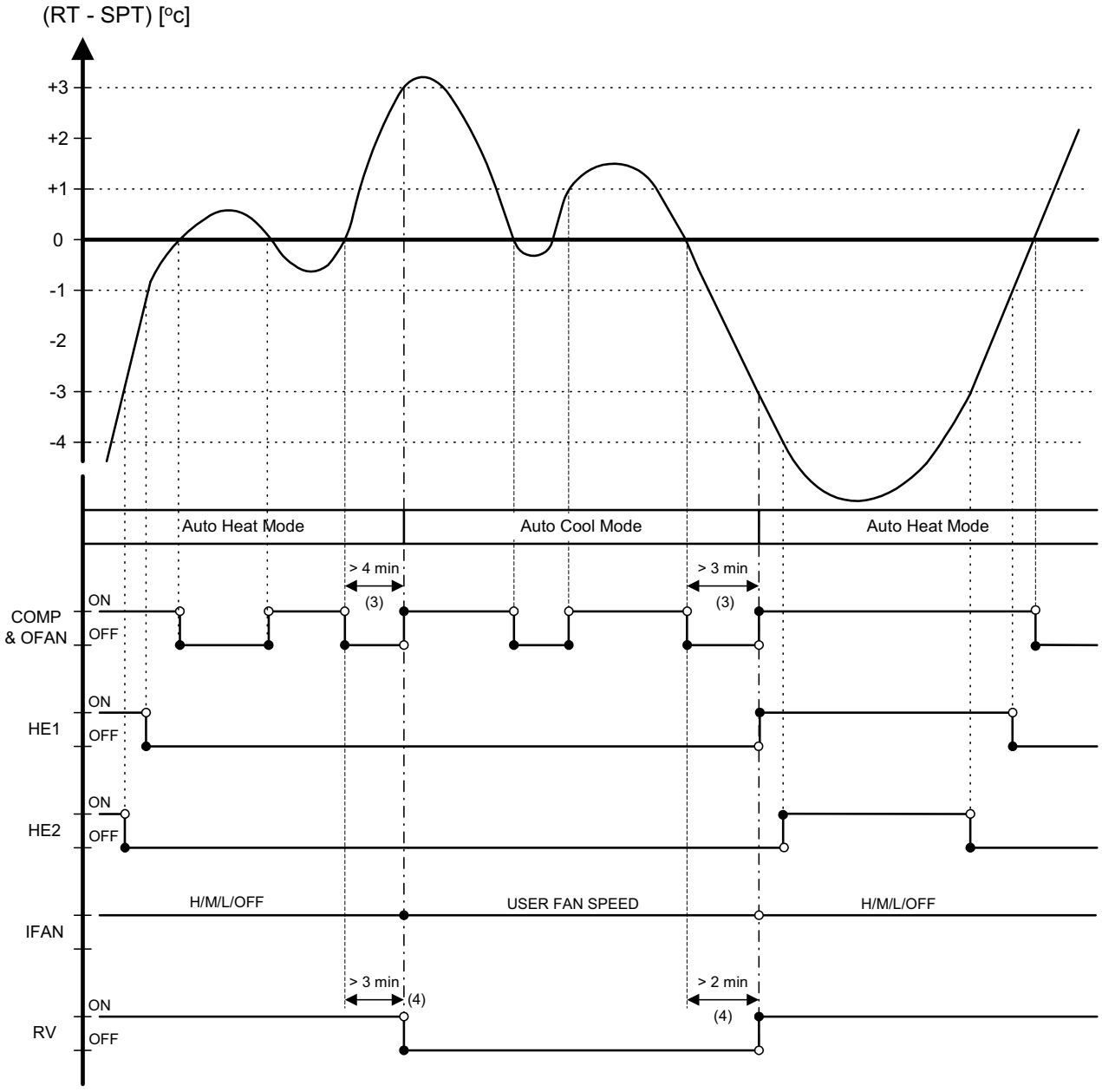
f. When unit is changed form Cool/Dry Mode to Auto Mode, the unit will continue to operate in (Auto) Cool Mode until the conditions for switching from Auto Cool to Auto Heat are satisfied.

Similarly, when unit is changed from Heat Mode to Auto Mode, the unit will continue to operate in (Auto) Heat Mode until the conditions for switching from Auto Heat to Auto Cool are satisfied.

11.10.2 Sequence Diagrams

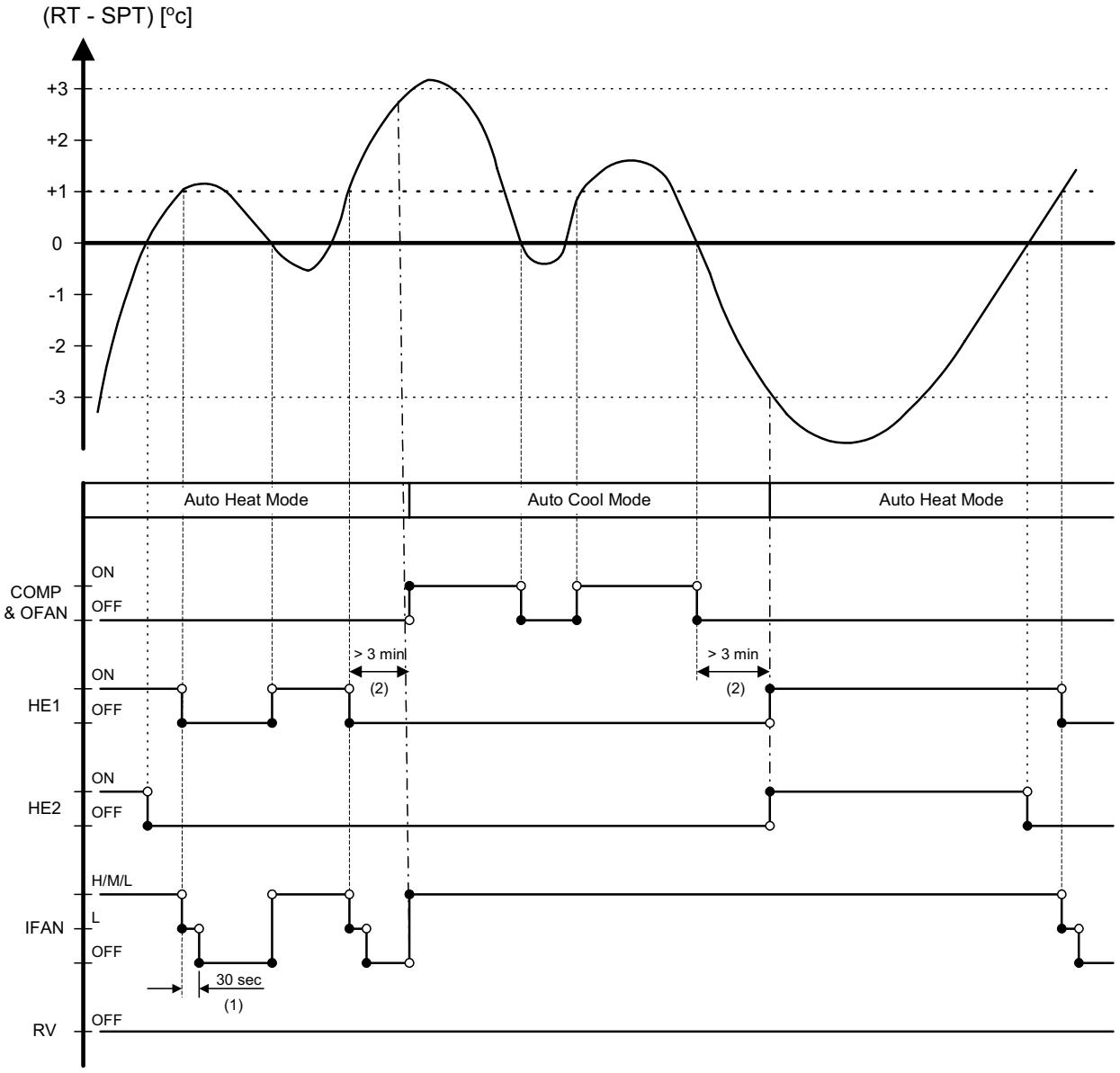
a. Auto Cooling or Heating, RC or SH Groups

Maintains room temp. at desired level by selecting between cooling and heating modes.



b. Auto Cooling or Heating RH Group

Maintains room temp. at desired level by selecting between Cooling or Heating Modes.

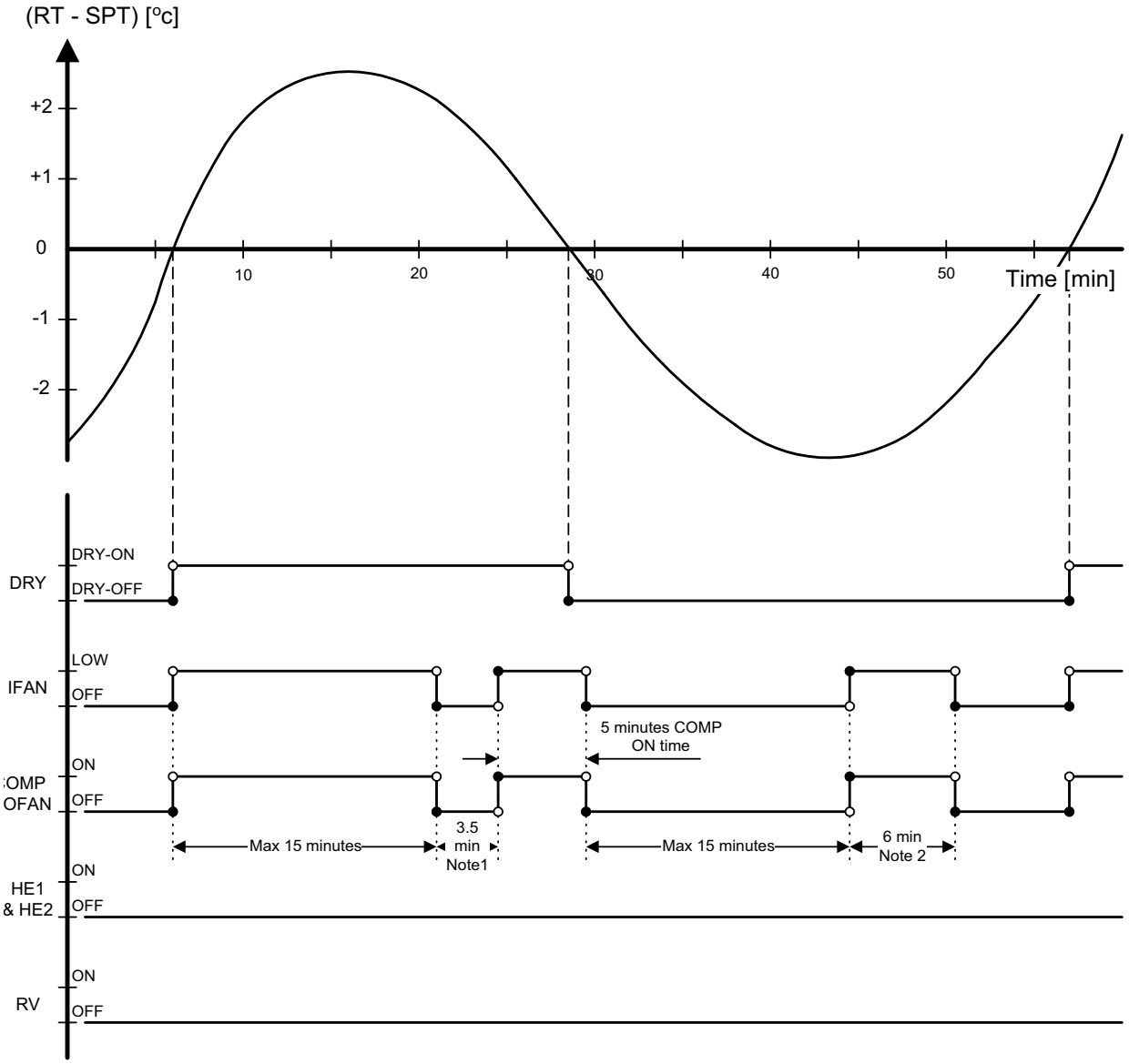


11.11 Dry Mode

11.11.1 Dry, ST or RC Group or P2000 Model with Any Group Settings

Mode: DRY
Temp: Selected desired temperature
Fan: LOW (automatically selected by software)
Timer: Any
I-FEEL: Any

Control function
Reduce room humidity with minimum temp. fluctuations by operating in Cool Mode with LOW speed IFAN.



NOTES

1. **When DRY is ON, the COMP is forced OFF for 3.5 min (longer than the 3 min Min COMP- OFF time) after every 15 min of continuous COMP operation.**
2. **When DRY is OFF, the COMP is forced ON for 6 min (longer than the 3 min Min COMP- ON time) after every 15 min of continuous COMP OFF time.**
3. **When DRY is changed from ON to OFF or vice versa, the limits mentioned in (1) & (2) are ignored. The COMP operation is only controlled by the 3 min Min OFF time and 1 min Min ON time.**
4. **In DRY Mode, IFAN is LOW when COMP is ON, and is OFF when COMP is OFF.**
5. **HEs are always OFF in DRY Mode.**

11.11.2 DRY, SH or RH group

Mode: DRY

Temp: Selected desired temperature

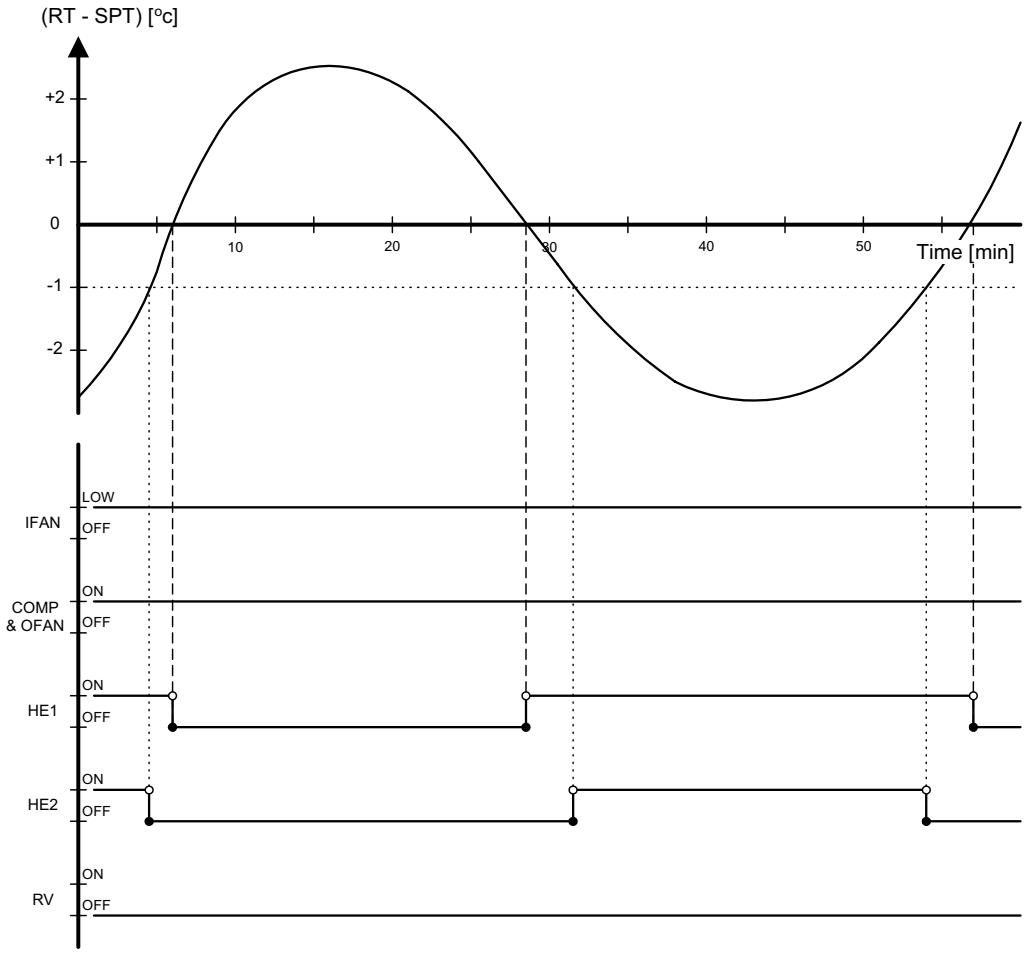
Fan: LOW (automatically selected by software)

Timer: Any

I-FEEL: Any

Control function

Reduces room humidity with minimum temp. fluctuations by operating in Cool Mode with LOW speed IFAN and HE.



11.12 Protection

11.12.1 Cooling Mode Protections

a. Indoor Coil Defrost

Mode: COOLING, DRY, AUTO

Temp: Selected desired temp.

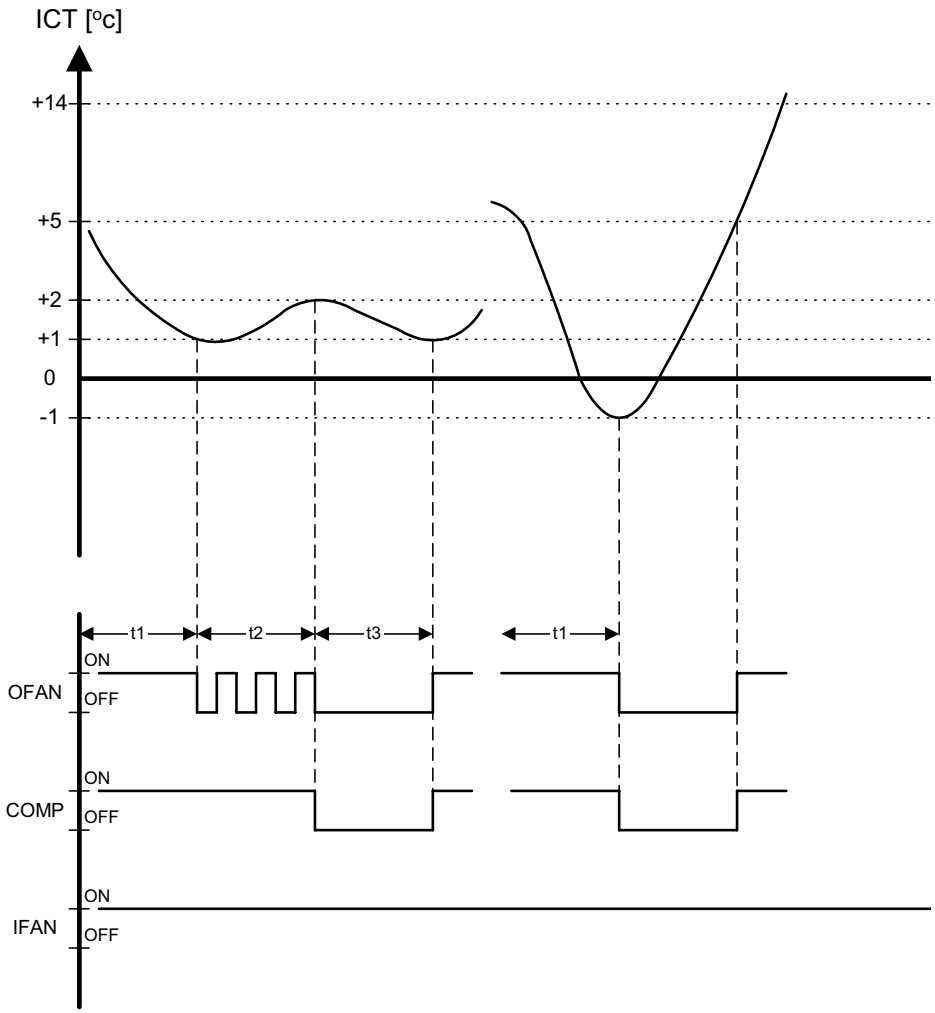
Fan: Any

Timer: Any

I-FEEL: ON or OFF

Control Function

Protects the indoor coil from ice formation at low ambient temperatures.



t1 = 5 min minimum for each COMP starting.
t2 = OFAN cycling (alternate between ON and OFF every 30 sec) for 20 min maximum.
t3 = COMP and OFAN stops for 10 min minimum.

b. High Pressure Protection

Mode: (AUTO) COOLING or DRY

Temp: Selected desired temperature

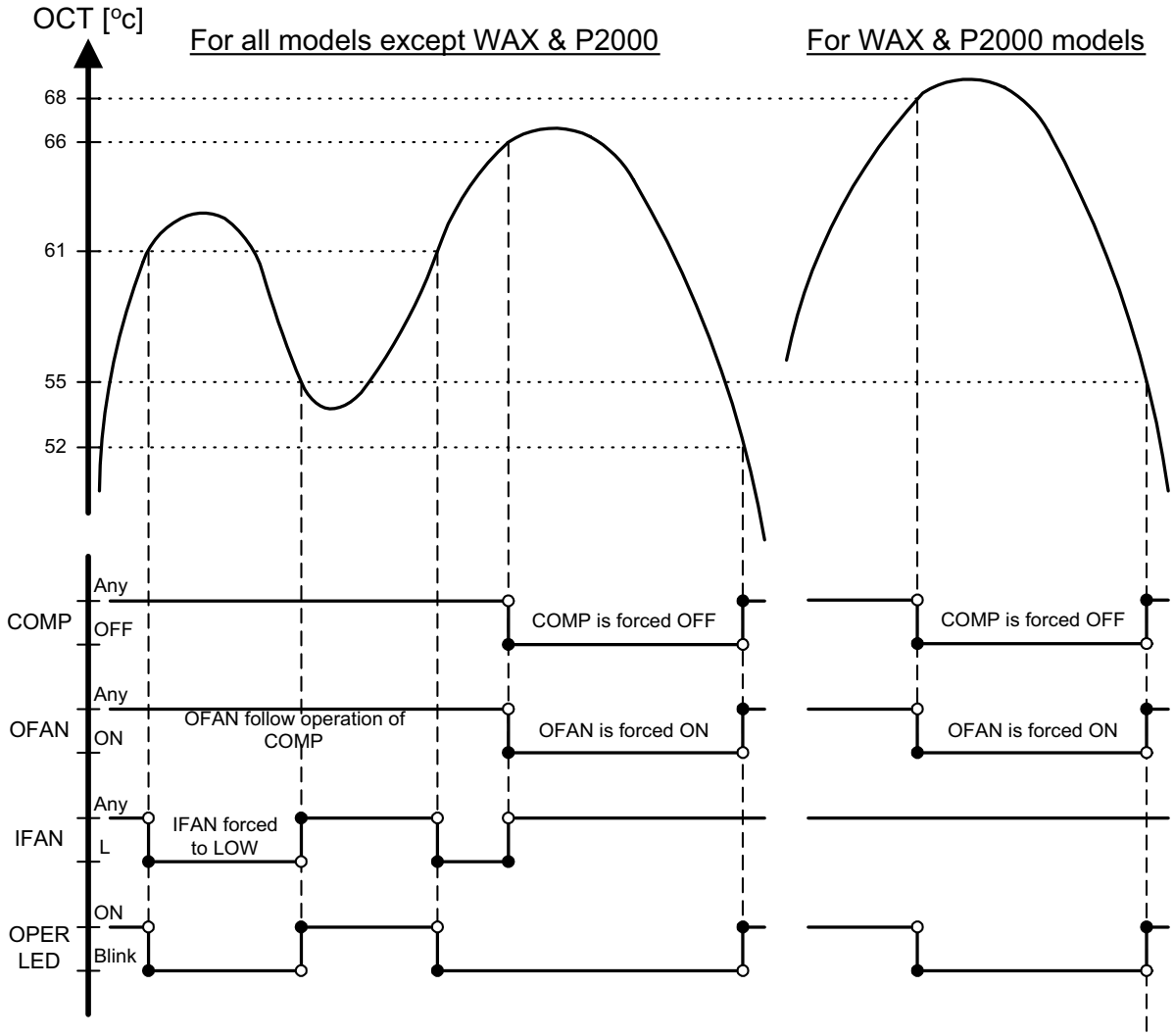
Fan: Any

Timer: Any

I-FEEL: ON or OFF

Control Function

To protect the COMP from the high pressure build-up in the outdoor coil during normal cooling operation, by switching OFF the IFAN and COMP.



NOTE

The ICT is also monitored during COOL and DRY modes, in case the RV control circuit is faulty. Whenever ICT reaches 70°C, which indicates a high pressure in the indoor coil, the COMP will be forced OFF automatically. The COMP can be turned ON again only after the ICT is under 70°C again and after the 3 min COMP ON delay time. The OPER LED will not blink in this case.

11.12.2 Heating Mode Protections

a. Outdoor Coil Deicing (excluding RH Group)

Mode: HEATING, AUTO (at heating)

Temp: Selected desired temperature

Fan: Any

Timer: Any

I-FEEL: Any

Control function

To protect the outdoor coil from ice formation by controlling COMP & RV operation.

1) Deicer Activation Algorithm

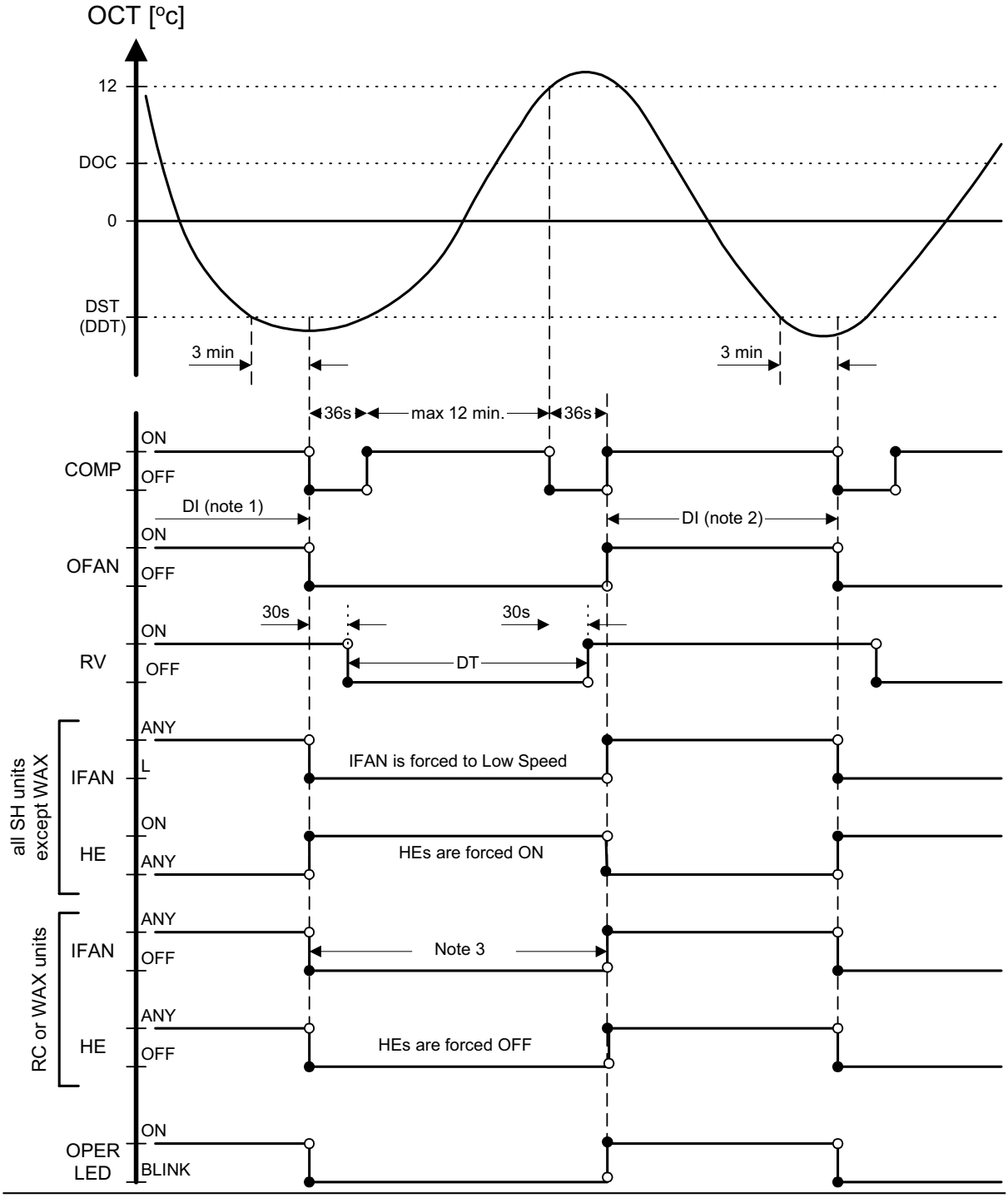
a) Static deicer threshold is -5°C

b) Dynamic deicer threshold changes of 3°C in 3 minutes in the OCT temperature

c) In first COMP activation (after SB or OFF), if OCT < 0°C, min time to first deicer is 10 min else 40 min.

d) In a case of reading 3 successive OCT values below –10°C and previously 3 successive OCT values of 43°C (4.7 K) , the unit will activate deicing procedure.

2) Deicing procedure



NOTES

1. **In the following Deicing cycles, the time interval between two Deicing cycles activation is between 30 to 80 min.**
2. **For RC group, IFAN is forced OFF.**
3. **For SH group, HEs are forced ON and IFAN is forced to operate at LOW speed, regardless of the ICT and difference between RAT & SPT.**
4. **When jumper J7 is set, the DST value is -2°C.**

b. High Pressure Protection (excluding RH Group)

Mode: (AUTO) HEATING

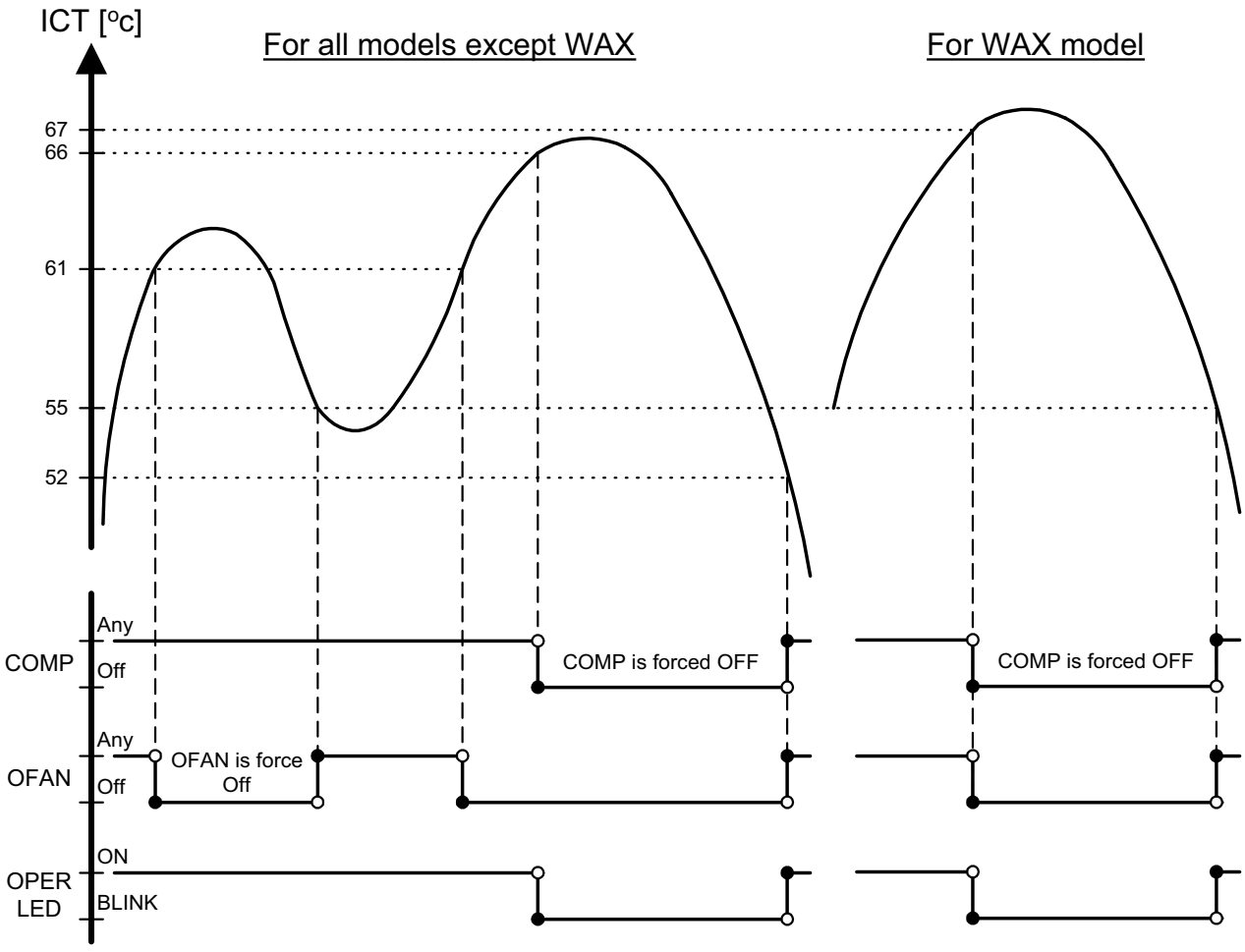
Fan: Any

Timer: Any

I-FEEL: ON or OFF

Control Function

Protects the compressor from high pressure by switching OFF the OFAN and COMP.

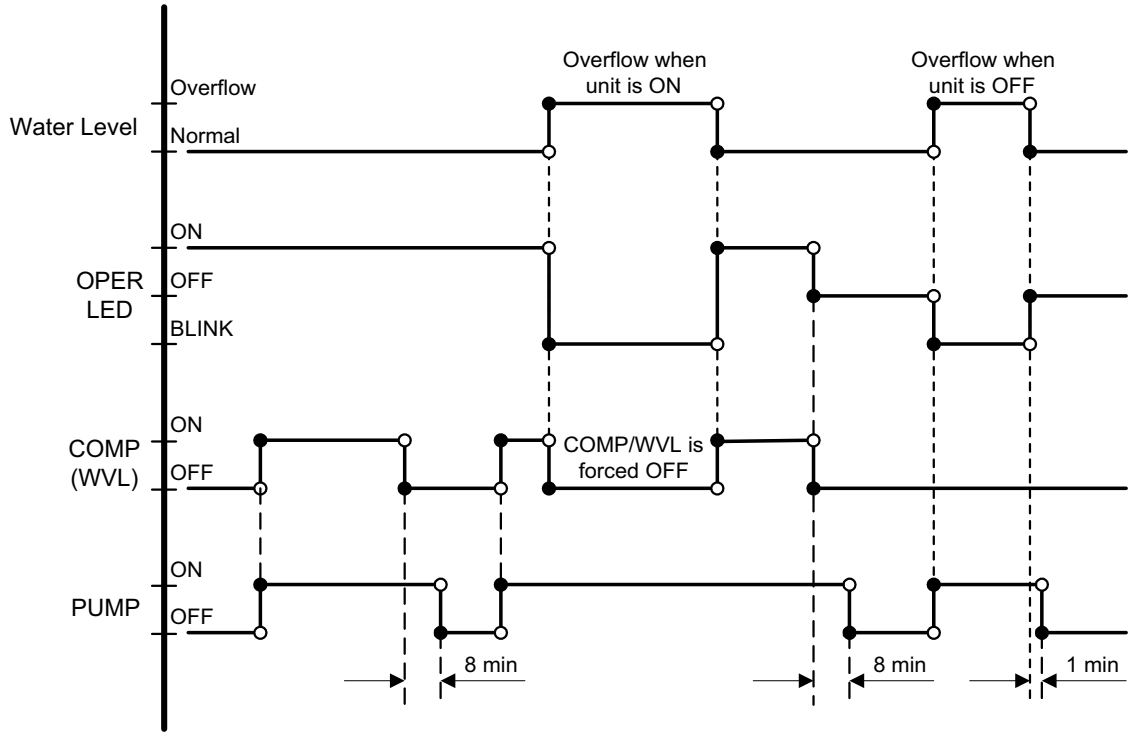


11.12.3 Condensation Pump (ECC/K model)

Mode: Cool, Dry, Auto
Temp: Selected desired temperature
Fan: Any
Timer: Any
I FEEL: Any

Control function:

Prevent Condensed water from Overflowing.



Notes:

1. The switch used for water level detection is closed under normal condition, and is open when water overflow.
2. For the NEC version of MCU, the "Over Flow" & “Normal” condition are indicated by logic “0” & “1” at the LEVEL4 input pin respectively.
3. For the Fujitsu version of MCU, the "Over Flow" & “Normal” condition are indicated by logic “1” & “0” at the LEVEL4 input pin respectively.
4. The “Overflow” condition can activate the water pump in SB and operating modes.

11.13 Forced Operation (Excluding PRX & PXD Models)

a. Forced operation allows units to start, stop and operate in cooling or heating in preset temp. according to the following table:

Forced Operation Mode	Pre-set Temp for : MBX, P2000, PX Models	Pre-set Temp for : FCD, RWK ,ELD, ECC, WAX, WNX, WMN Models
Cooling	20 ºC	22 ºC
Heating	25 ºC	28 ºC

NOTES

1. **While under the forced operation, the temperature compensation schedule is disabled.**
2. **The forced operation is activated when the mode button on the Display Board is used to switch the unit to COOL or HEAT mode.**
3. **The IFAN is always set to Autofan Speed in forced operation.**

Temp: Set – desired temperature selected

Fan: Any

Timer: Interact with Sleep Timer

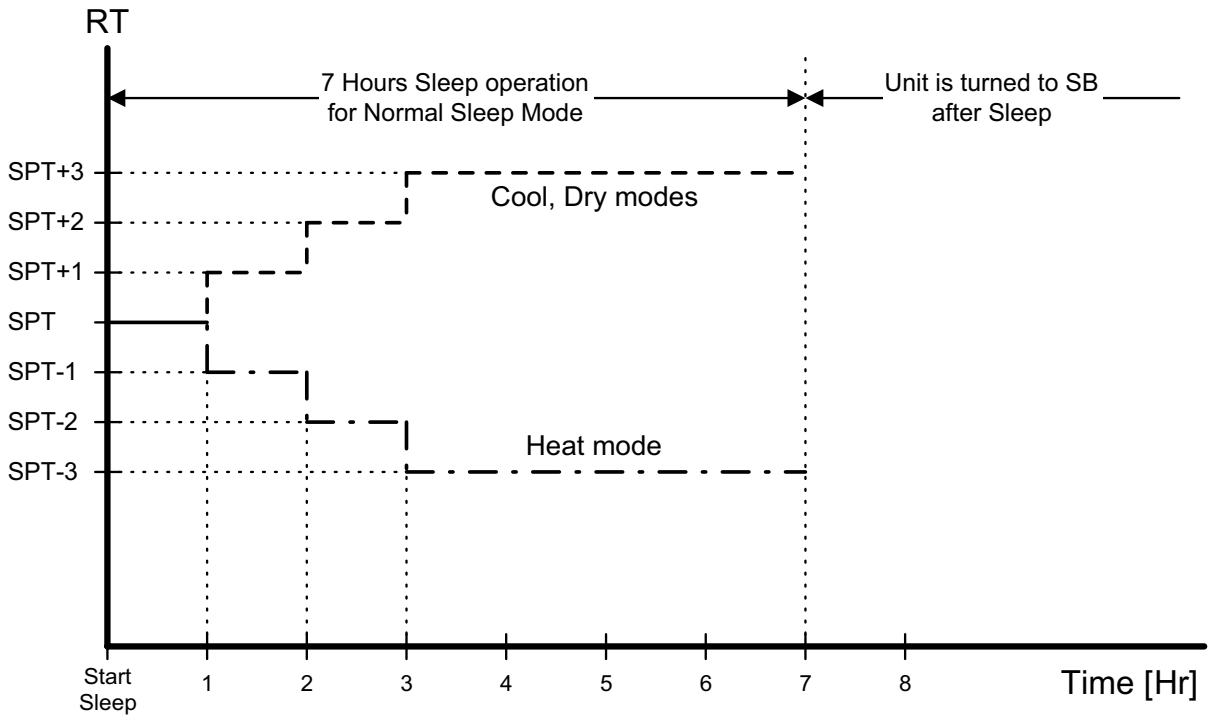
I-FEEL: ON or OFF

The Sleep mode is activated by using the SLEEP button on the R/C. In Sleep Mode, the unit will automatically adjust the SPT to turn up/down the room temperature (RT) gradually to provide maximum comfort for the sleeping user.

Sleep is treated as TIMER function. Therefore, the TIMER LED is activated similar to TIMER function.

11.14 SPT Adjustment in Sleep Mode

- In COOL, AUTO COOL or DRY modes, the SPT adjustment is positive (from 0 to +3°C).
- In HEAT or AUTO HEAT modes, the SPT adjustment is negative (from 0 to -3°C).
- In other modes, there is no SPT adjustment.
- The SPT adjustment is cancelled when the Sleep mode is cancelled.



NOTE

If OFF-timer is active, the unit may go to SB before or after 7 hours of sleep operation.

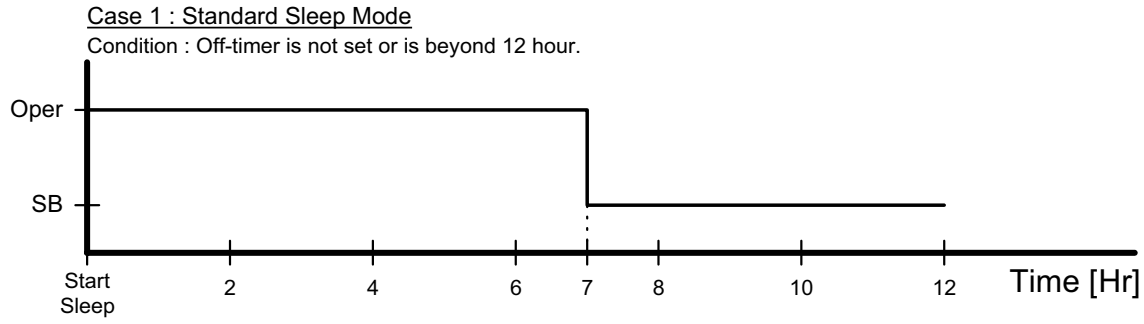
11.14.1 Time Adjustment in SLEEP Mode

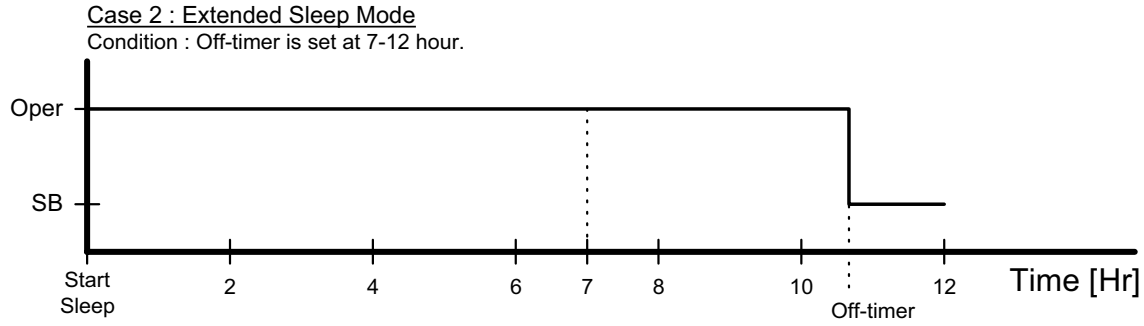
In 10V4, the user can make use of the Off-Timer to extend the Sleep Time from 7 hours to 12 hour (max). The operation of the new “Extended Sleep Mode” is illustrated by the graphs below.

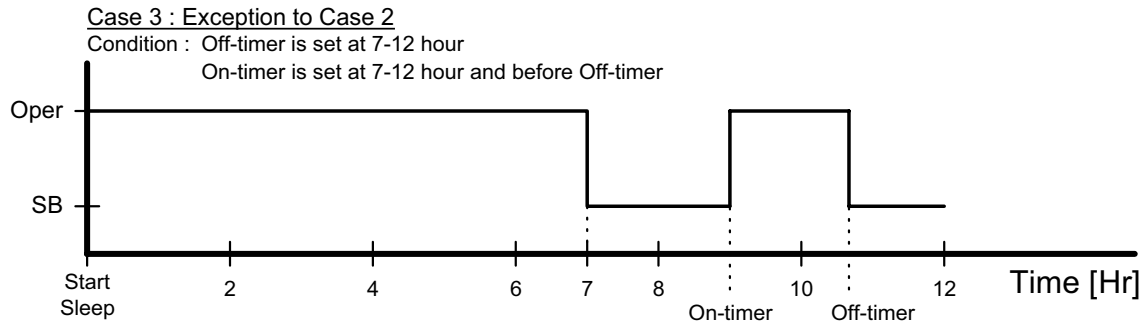
Case 1 is the Standard Sleep Mode, which is the only sleep mode in the previous version of MCU. The A/C unit simply works for 7 hours, then goes to SB.

Case 2 is the new Extended Sleep Mode. If an active Off-Timer is set to turn off the A/C between 7-12 hour, relative to the starting of Sleep, the Sleep time is extended. And, instead of going to SB at the 7th hour, the A/C will work until reaching the Off-time.

Case 3 is an exception to case 2. The Sleep Mode will not be extended to the Off-Time when the Off-Timer is preceded by an On-Timer, which is also between 7-12 hour.





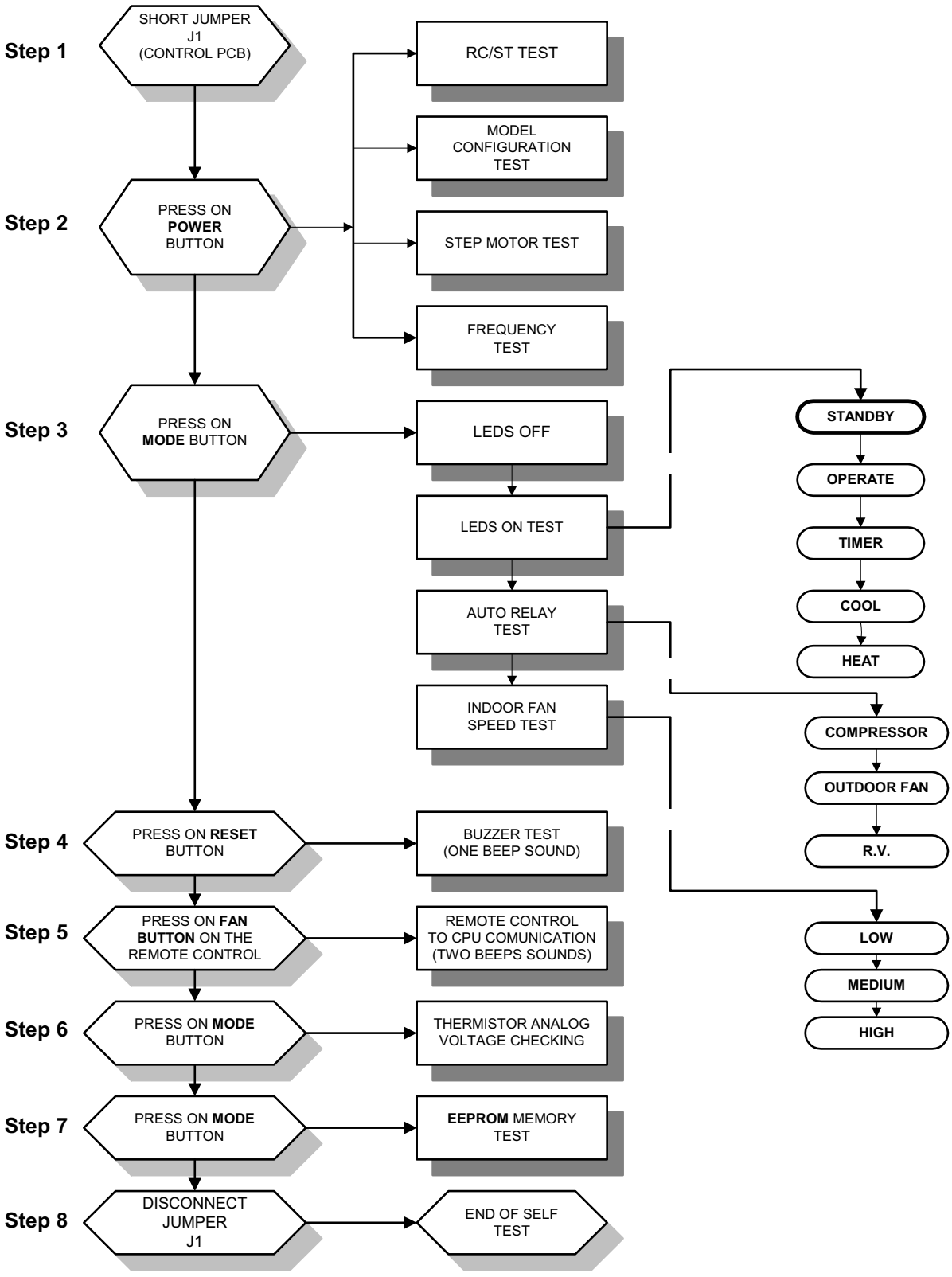


11.15 Controller Self-Test Procedure

11.15.1 By Shorting Test Jumper J1

SELF-TEST FLOW CHART

FOR CONTROLLER (VERSION 4V5 OR HIGHER)



11.15.2 By Remote Control Settings:

a. STEP 1: TURNING ON THE POWER.
Turn ON the power, make sure that the unit is in operation.

b. STEP 2 : ENABLE SELF-TEST MODE

1) Use the remote control to send the first settings to display / indoor unit HEAT mode, HIGH IFAN, set temperature to 16 ºC**,** no I-FEEL Sleep or any other timer settings are needed.

2) Cover the IR transmitter components in the remote control so that it will not transmit the signals to the indoor unit display.

3) Use the remote control to send the second settings to display / indoor unit COOL mode, LOW IFAN, no I-FEEL Sleep or any other timer settings.

4) Uncover the remote control IR transmitter and change the temperature settings. If the display/indoor unit receive the settings properly the following steps will start:

c. STEP 3: MODEL SETTING CONFIRMATION

1) The STAND-BY and COOL LEDS will indicate the operation mode as follows:

OPERATION MODE	STAND-BY LED	COOL LED
ST	ON	OFF
RC	OFF	OFF
SH	OFF	ON
RH	ON	ON

2) Testing the Model configuration. Selected by the COMP, STAND-BY, TIMER LEDS and FILTER will indicate the model configuration as follows (the relevant line for this manual is highlighted):

MODEL	COMP	OPERATE LED	TIMER LED	FILTER LED
WNG	ON	OFF	OFF	OFF
MBX	ON	OFF	OFF	ON
WNX	ON	OFF	ON	OFF
PRX	ON	ON	OFF	OFF
WMN1	ON	ON	OFF	ON
EMD/LS	ON	ON	ON	OFF
ECC-K	ON	ON	ON	ON
WMN 4	OFF	OFF	ON	OFF
PXD	OFF	OFF	ON	ON
WMN 2/WHX	OFF	ON	OFF	ON
WMN 3	OFF	ON	ON	ON

In this term the step motor will turn to HOME POSITION.

d. STEP 3: AUTO LED WALK TEST.

1) All the LEDS will turn OFF.

2) All the LEDS will turn ON for 1 second one by one in the following sequence:

STAND-BY ⇨ OPERATE ⇨ TIMER ⇨ FILTER ⇨ COOL ⇨ HEAT.

3) In PRX all the LEDS will turn ON for 1 second one by one in the following sequence : 18 °c ⇨ 20 °c ⇨ 22 °c ⇨ 24 °c ⇨ 26 °c ⇨ 28 °c ⇨ 30 °c ⇨ High IFAN ⇨ Auto IFAN ⇨ Med IFAN ⇨ Low IFAN ⇨ STAND-BY⇨ TIMER ⇨ FILTER ⇨COOL⇨ HEAT.

e. STEP 4: AUTO REALY WALK TEST:

All relays will energize one by one in the following sequence:

COMPRESSOR ⇨ OUTDOOR FAN⇨R. V. ⇨ HEATER 1 ⇨ HEATER 2 ⇨ INDOOR WATER PUMP ⇨ SWING or OUTDOOR WATER PUMP ⇨ INDOOR FAN: LOW ⇨ MID ⇨ HIGH.

When the relay walk test is completed, the next test will start automatically.

f. STEP 5: FREQUENCY TESTING:

If the frequency measuring process fails the COOL LED will turn ON. In order to move to the next step, press ON/OFF button on the remote control.

g. STEP 6: INPUT TEST.

The test purpose is to check the analog real time indicators (thermistors, LEVEL and clock) according to the table below.

LED Indicator	Condition for LED to be ON
STBY LED	Room thermistor ≠ 25°c
OPER LED	Indoor coil thermistor ≠ 25°c
TIMER LED	Outdoor coil thermistor ≠ 25°c
FILTER LED	Clock
COOL LED	LEVEL 2&3
HEAT LED	LEVEL 4

h. STEP 7: TIMING RESET TEST (WATCH DOG).

The test purpose is to verify that the CPU rise time after power failure is between 1 to 3 sec, test results are indicated on the LEDS : STAND-BY,OPER, TIMER and FILTER turning ON one by one.

The results of the test are coded as follows:

Pass condition:

1 sec - STAND-BY and OPER are turned ON

2 sec - STAND-BY, OPER and TIMER are turned ON

Fail condition:

0 sec - STAND-BY is turned ON

3 sec - STAND-BY, OPER, TIMER and FILTER are turned ON

When the timing reset test is completed, the next test will start automatically.

i. STEP 8: MEMORY TEST (EEPROM)

The test purpose is to check if the memory is functioning correctly. The test result is reported by using the STAND-BY and FILTER LEDS:

LED Indicator	Condition for LED to be ON
STAND-BY LED	Test passed
FILTER LED	Test failed

AT THIS POINT THE SELF-TEST IS COMPLETED.

In order to terminate Self-Test mode the User can change the unit setting from COOL Mode, LOW FAN to COOL Mode, MED FAN or to wait without using the remote control for 60 sec.

Values of Sensors Temperature VS. Voltage (DC)

Temp. (°C)	Voltage (V)	Temp. (°C)	Voltage (V)	Temp. (°C)	Voltage (V)	Temp. (°C)	Voltage (V)
-20	4,554	2	3.744	24	2.555	46	1.487
-19	4,529	3	3.695	25	2.5	47	1.447
-18	4,502	4	3.646	26	2.445	48	1.409
-17	4,475	5	3.595	27	2.391	49	1.371
-16	4.446	6	3.544	28	2.338	50	1.334
-15	4.417	7	3.492	29	2.284	51	1.298
-14	4.386	8	3.439	30	2.232	52	1.263
-13	4.354	9	3.386	31	2.18	53	1.228
-12	4.322	10	3.332	32	2.128	54	1.195
-11	4.287	11	3.278	33	2.077	55	1.162
-10	4.252	12	3.223	34	2.027	56	1.13
-9	4.216	13	3.168	35	1.978	57	1.099
-8	4.178	14	3.113	36	1.929	58	1.069
-7	4.14	15	3.058	37	1.881	59	1.04
-6	4.1	16	3.002	38	1.834	60	1.011
-5	4.059	17	2.946	39	1.798	61	0.983
-4	4.017	18	2.89	40	1.742	62	0.956
-3	3.974	19	2.833	41	1.698	63	0.929
-2	3.93	20	2.777	42	1.654	64	0.904
-1	3.885	21	2.722	43	1.611	65	0.879
0	3.839	22	2.666	44	1.569	66	0.854
1	3.792	23	2.61	45	1.527	67	0.831

11.16 System Diagnostics

Pressing Mode button for 5-10 seconds in SB or any other operation mode will activate the DIAGNOSTICS mode, acknowledged by 3 short beeps and lighting of COOL and HEAT LEDs.
In DIAGNOSTICS mode, system failures will be indicated by the blinking of HEAT & COOL LEDs.
The coding method is as follows:

- HEAT LED blinks 5 times in 5 seconds, and then turns off for the next 5 seconds.
- COOL LED blinks during the same 5 seconds according to the following table:

No.	Problem	1	2	3	4	5
1	RT1 is disconnected	○	●	●	●	●
2	RT1 is shorted	○	●	●	●	○
3	RV fault	○	●	●	○	●
4	RT2 is disconnected	●	○	●	●	●
5	RT2 is shorted	●	○	●	●	○
6	(Reserved)	●	○	●	○	●
7	RT2 temp reading doesn't change	●	○	●	○	○
8	RT3 is disconnected	●	●	○	●	●
9	RT3 is shorted	●	●	○	●	○
10	(Reserved)	●	●	○	○	●
11	RT3 temp reading doesn't change	●	●	○	○	○
12	RT2 & RT3 temp reading doesn't change	●	○	○	○	○

LEGEND

○ - ON, ● - OFF

NOTES

1. **If faults occur in more than one thermistor (except case number 12 in table above), only one fault will be indicated according to the following order: RT3, RT2, RT1.**
2. **A/C will return to normal mode when sending a command by the R/C during system DIAGNOSTICS mode. If the command from the R/C contains a Group ID, the ID will become the new Group ID of the ELCON unit.**

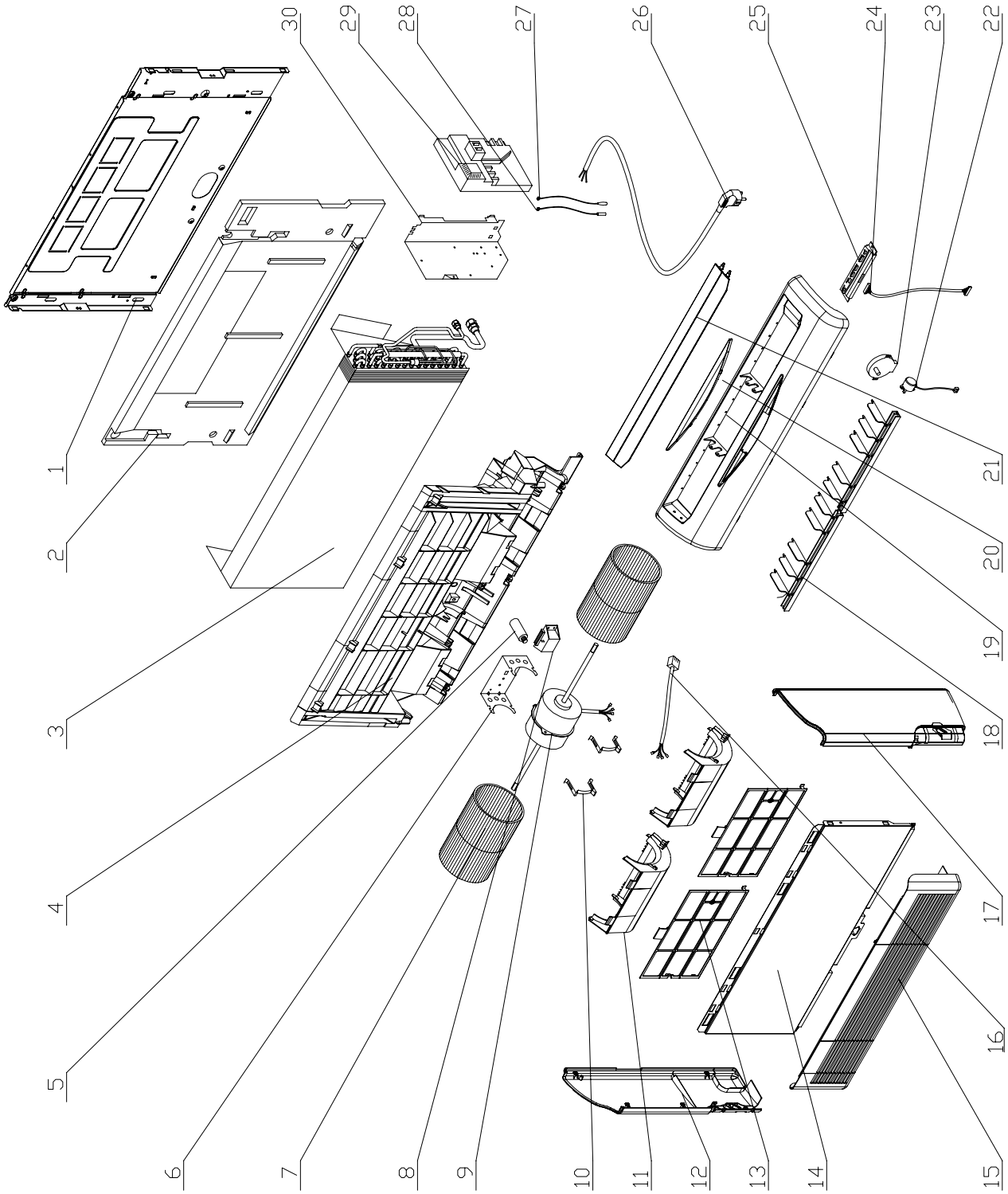
12. TROUBLESHOOTING

No.	SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
1	Power supply indicator (Red LED) does not light up.	No power supply.	Check power supply. If power supply is OK, check display and display wiring, if OK, replace PCB.
2	Unit does not respond to remote control command.	Remote control command did not reach the indoor unit.	Check remote control batteries. If batteries are OK, check display and display wiring, if OK, replace PCB.
3	Unit responds to remote control command but operate indicator (Green LED) does not light up.	Problem with display PCB.	Replace display PCB.
4	Indoor fan does not start (louvers are opened and Green LED lights up).	Unit in HEAT MODE and coil is still not warm.	Change to COOL MODE and check.
		Problem with PCB or capacitor.	Change to HIGH speed and check power supply to motor is higher than 130 VAC. If OK replace capacitor, if not OK replace controller.
5	Indoor fan works when unit is OFF, and indoor fan speed is not changed by remote control command.	PCB problem.	Replace controller.
6	Compressor does not start.	Electronics control problem or protection.	Perform diagnostics, and follow the actions described below.
7	Compressor stops during operation and Green LED remains on.	Electronic control or power supply problem.	Perform diagnostics, and follow the actions described below.
8	Compressor is ON but outdoor fan does not work.	Problem with outdoor electronics or outdoor fan capacitor.	Switch unit to COOL mode, HIGH speed with 16 degrees set point (summer) or HEAT mode high speed with 30 degrees set point (winter). Check power supply to motor is higher than 130 VAC. If OK replace capacitor, if not OK replace controller.
9	Unit works in wrong mode (cool instead of heat or heat instead of cool).	Electronics or power connection to RV.	Check RV power connections. If OK, check RV operation with direct 230 VAC power supply, if OK, replace outdoor controller.
10	All components are operating properly but no cooling or heating.	Refrigerant leak.	Check refrigeration system.

No.	SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
11	One of the protections is activated and compressor is stopped with no apparent reason.	Control problem or refrigeration system problem.	Perform diagnostics to detect active protection, and take action accordingly.
12	Compressor motor is noisy and no suction is present.	Wrong phase order to compressor.	Check compressor phase order.
13	Water leakage from indoor unit.	Indoor unit drainage tube is blocked.	Check and open drainage tube.
14	Freezing of outdoor unit in HEAT Mode and outdoor unit base is blocked with ice.		Connect base heater.
15	Unit operates with wrong fan speeds or wrong frequency.	Wrong jumper settings.	Perform diagnostics to obtain unit model or if operating by EEPROM parameters.
16	Filter LED comes ON after 512 hours of operation	Clogged air-filter	Replace air-filter. Press the RESET button.

13. EXPLODED VIEWS & SPARE PARTS LISTS

13.1 Indoor Unit: PXD 9, 12, 15, 18



13.2 Indoor Unit: PXD 9

No.	Item Code	Item Desc	Quantity
13	221555	FILTER (SMALL)	2
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
7	293321	CENTRIFUGAL FAN (SMALL)	2
1	307979	BACK PANEL (SMALL)	1
14	307981	FRONT PANEL (SMALL)	1
30	311036	STORM METAL PANEL	1
6	323425	MOTOR SUPPORT LENGTH 99	1
19	370281	AIR OUTLET FRAME (SMALL)	1
18	371257	VERTICAL LOUVER CONNECTOR	10
21	372338	HORIZONTAL LOUVER FRONT (SMALL)	1
21	372339	HORIZONTAL LOUVER BACK (SMALL)	1
11	372341	FAN COVER (SMALL)	2
17	373244	RIGHT PANEL	1
12	373245	Side Plate / Left	1
4	373247	FAN FRAME(SMALL)	1
20	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
2	382334	BASE EPS (SMALL)	1
24	391508	CABLE DISPLAY	1
23	436665	STEP MOTOR	1
28	438082	Thermistor Indoor	1
27	438413	ROOM Sensor	1
9	4520158	MOTOR PXD 9-12-15	1
16	4520429	MOTOR WIRE ---PXD	1
9	4520929	Motor Assy. for PXD9-12-15	1
10	4521029	CLIP	2
29	4524613	STORM DST-8 10V7_W 916-355-13 ENG. VER.	1
3	452731900	Evap. assy.	1
8	452816100	Transformer	1
29	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
5	455000600	Capacitor With Screw for fan motor	1
15	484001	AIR INLET ASSY (SMALL)	1

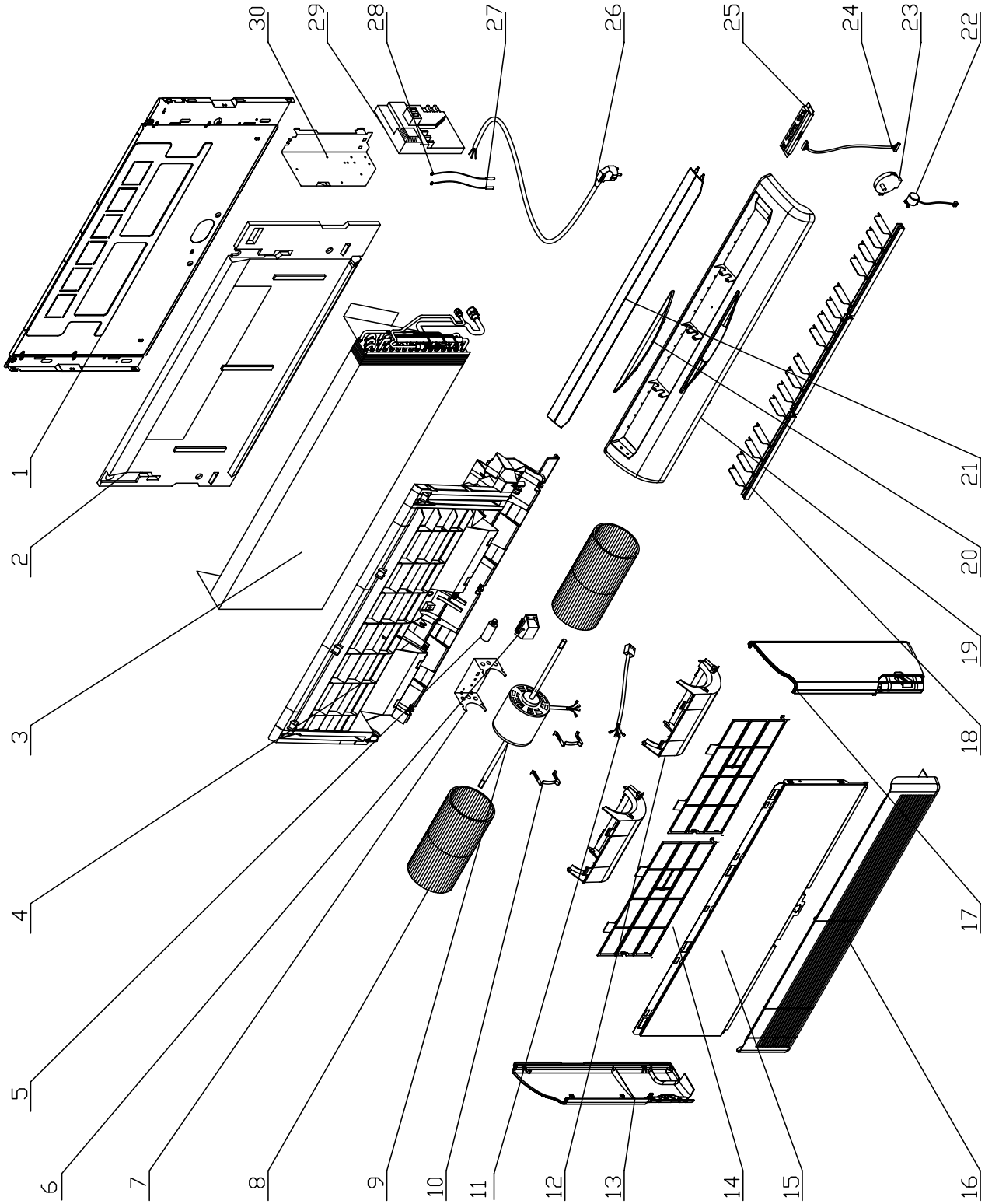
13.3 Indoor Unit: PXD 12

No.	Item Code	Item Desc	Quantity
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
1	307979	BACK PANEL (SMALL)	1
14	307981	FRONT PANEL (SMALL)	1
6	323425	MOTOR SUPPORT LENGTH 99	1
19	370281	AIR OUTLET FRAME (SMALL)	1
21	372339	HORIZONTAL LOUVER BACK (SMALL)	1
17	373244	RIGHT PANEL	1
4	373247	FAN FRAME(SMALL)	1
9	4520929	Motor Assy. for PXD9-12-15	1
16	4520429	MOTOR WIRE ---PXD	1
9	4520158	MOTOR PXD 9-12-15	1
27	438413	ROOM Sensor	1
28	438082	Thermistor Indoor	1
23	436665	STEP MOTOR	1
24	391508	CABLE DISPLAY	1
2	382334	BASE EPS (SMALL)	1
20	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
15	484001	AIR INLET ASSY (SMALL)	1
5	455000600	Capacitor With Screw for fan motor	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
29	452837700	STORM-1 (PXD & K)916-355-18	1
3	452791200	Evap. assy.	1
29	4524613	STORM DST-8 10V7_W 916-355-13 ENG. VER.	1
8	4520933	Auto-transformer	1
12	373245	Side Plate / Left	1
21	372338	HORIZONTAL LOUVER FRONT (SMALL)	1
30	311036	STORM METAL PANEL	1
18	371257	VERTICAL LOUVER CONNECTOR	10
13	221555	FILTER (SMALL)	2
7	293321	CENTRIFUGAL FAN (SMALL)	2
10	4521029	CLIP	2
11	372341	FAN COVER (SMALL)	2

13.4 Indoor Unit: PXD 15

No.	Item Code	Item Desc	Quantity
13	221555	FILTER (SMALL)	2
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
7	293321	CENTRIFUGAL FAN (SMALL)	2
1	307979	BACK PANEL (SMALL)	1
14	307981	FRONT PANEL (SMALL)	1
30	311036	STORM METAL PANEL	1
6	323425	MOTOR SUPPORT LENGTH 99	1
19	370281	AIR OUTLET FRAME (SMALL)	1
18	371257	VERTICAL LOUVER CONNECTOR	10
21	372338	HORIZONTAL LOUVER FRONT (SMALL)	1
21	372339	HORIZONTAL LOUVER BACK (SMALL)	1
11	372341	FAN COVER (SMALL)	2
17	373244	RIGHT PANEL	1
12	373245	Side Plate / Left	1
4	373247	FAN FRAME(SMALL)	1
20	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
2	382334	BASE EPS (SMALL)	1
24	391508	CABLE DISPLAY	1
23	436665	STEP MOTOR	1
28	438082	Thermistor Indoor	1
27	438413	ROOM Sensor	1
10	4521029	CLIP	2
29	4524613	STORM DST-8 10V7_W 916-355-13 ENG. VER.	1
9	4524925	Motor Assy. for PXD15	1
3	452808900	Evap. assy.	1
29	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
5	455000600	Capacitor With Screw for fan motor	1
15	484001	AIR INLET ASSY (SMALL)	1

13.5 Indoor Unit: PXD 18, 24, 30



13.6 Indoor Unit: PXD 18

No.	Item Code	Item Desc	Quantity
14	221554	FILTER PXD (BIG)	2
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
8	293322	CENTRIFUGAL FAN (BIG)	2
1	307980	BACK PANEL £¨BIG£©	1
15	307982	FRONT PANEL (BIG)	1
30	311036	STORM METAL PANEL	1
7	323422	MOTOR SUPPORT LENGTH 132	1
19	370280	AIR OUTLET FRAME (BIG)	1
18	371257	VERTICAL LOUVER CONNECTOR	12
21	372336	HORIZONTAL LOUVER FRONT (BIG)	1
21	372337	HORIZONTAL LOUVER BACK (BIG)	1
12	372340	FAN COVER (BIG)	2
17	373244	RIGHT PANEL	1
13	373245	Side Plate / Left	1
4	373246	FAN FRAME (BIG)	1
20	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
2	382333	BASE EPS (BIG)	1
24	391508	CABLE DISPLAY	1
23	436665	STEP MOTOR	1
28	438082	Thermistor Indoor	1
27	438413	ROOM Sensor	1
9	4520159	MOTOR PXD 24-28	1
11	4520429	MOTOR WIRE ---PXD	1
9	4520931	Motor Assy. for PXD24-28	1
6	4520934	Auto-transformer	1
10	4521029	CLIP	2
29	4524613	STORM DST-8 10V7_W 916-355-13 ENG. VER.	1
3	4527244	Evaporator PXD18 R410A	1
29	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
5	455000604	Capacitor With Screw 1.5uF	1
16	484002	AIR INLET ASSY (BIG)	1

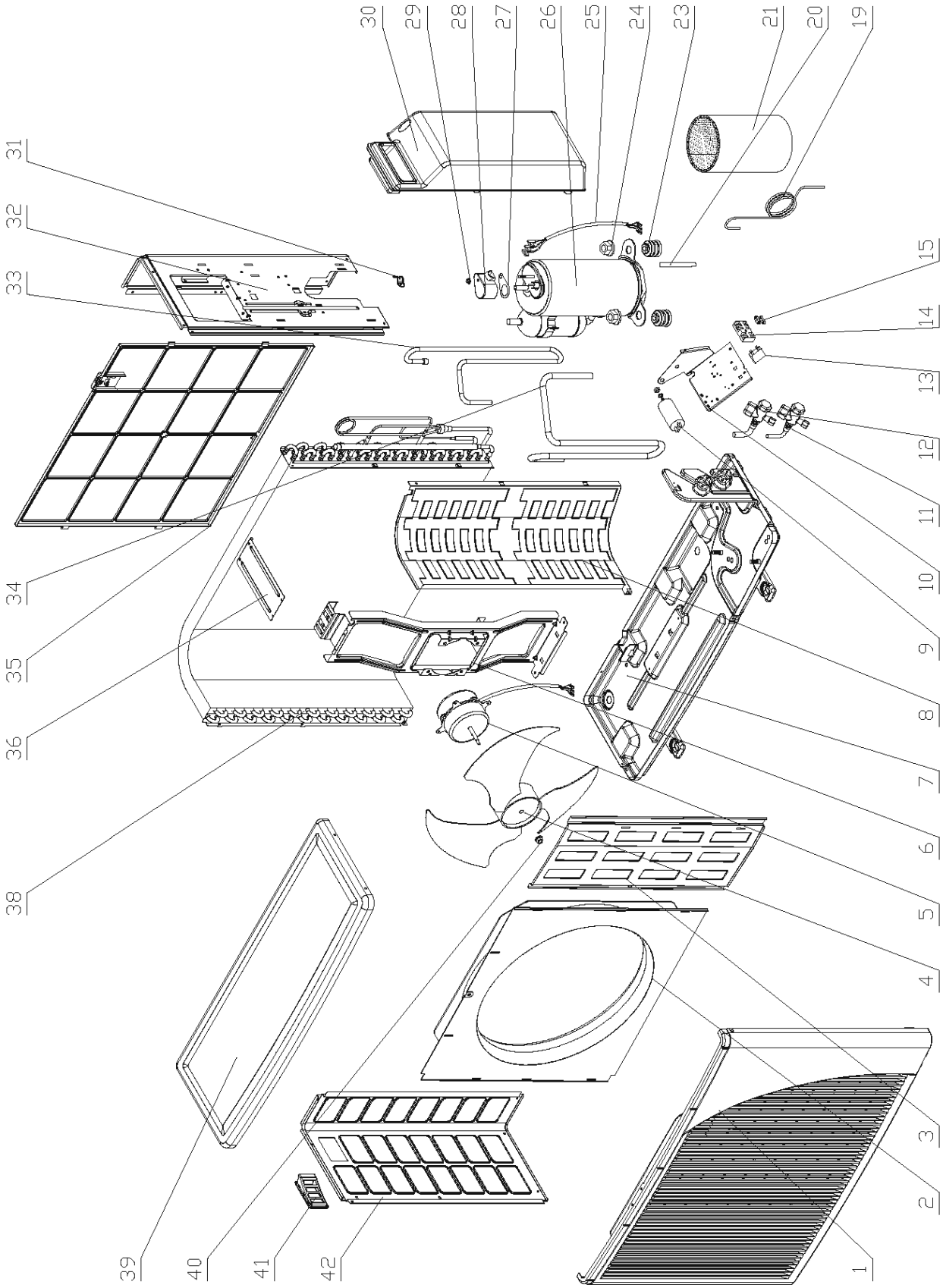
13.7 Indoor Unit: PXD 24

No.	Item Code	Item Desc	Quantity
14	221554	FILTER PXD (BIG)	2
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
8	293322	CENTRIFUGAL FAN (BIG)	2
1	307980	BACK PANEL £¨BIG£©	1
15	307982	FRONT PANEL (BIG)	1
30	311036	STORM METAL PANEL	1
7	323422	MOTOR SUPPORT LENGTH 132	1
19	370280	AIR OUTLET FRAME (BIG)	1
18	371257	VERTICAL LOUVER CONNECTOR	12
21	372336	HORIZONTAL LOUVER FRONT (BIG)	1
21	372337	HORIZONTAL LOUVER BACK (BIG)	1
12	372340	FAN COVER (BIG)	2
17	373244	RIGHT PANEL	1
13	373245	Side Plate / Left	1
4	373246	FAN FRAME (BIG)	1
20	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
2	382333	BASE EPS (BIG)	1
24	391508	CABLE DISPLAY	1
23	436665	STEP MOTOR	1
28	438082	Thermistor Indoor	1
27	438413	ROOM Sensor	1
9	4520159	MOTOR PXD 24-28	1
11	4520429	MOTOR WIRE PXD	1
9	4520931	Motor Assy. for PXD24-28	1
6	4520934	Auto-transformer	1
10	4521029	CLIP	2
29	4524613	STORM DST-8 10V7_W 916-355-13 ENG. VER.	1
29	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
3	452907300	EVAPRATOR ASSY	1
5	455000602	Capacitor With Screw for fan motor	1
16	484002	AIR INLET ASSY (BIG)	1

13.8 Indoor Unit: PXD 30

No.	Item Code	Item Desc	Quantity
13	221554	FILTER PXD (BIG)	2
25	234213	DISPLAY BOX PXD EHK: 906-041-02	1
22	263034	SWING MOTOR	1
7	293322	CENTRIFUGAL FAN (BIG)	2
1	307980	BACK PANEL £¨BIG£©	1
14	307982	FRONT PANEL (BIG)	1
30	311036	STORM METAL PANEL	1
6	323422	MOTOR SUPPORT LENGTH 132	1
18	370280	AIR OUTLET FRAME (BIG)	1
17	371257	VERTICAL LOUVER CONNECTOR	12
20	372336	HORIZONTAL LOUVER FRONT (BIG)	1
21	372337	HORIZONTAL LOUVER BACK (BIG)	1
11	372340	FAN COVER (BIG)	2
16	373244	RIGHT PANEL	1
12	373245	Side Plate / Left	1
4	373246	FAN FRAME (BIG)	1
19	375209-16	DISPLAY PANEL ASSY.---ELECTRA	1
2	382333	BASE EPS (BIG)	1
24	391508	CABLE DISPLAY	1
26	391726	Power Supply	1
23	436665	STEP MOTOR	1
27	438082	Thermistor Indoor	1
28	438413	ROOM Sensor	1
10	4520429	MOTOR WIRE ---PXD	1
8	4520932	Motor Assy. for PXD32	1
9	4521029	CLIP	2
29	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700	STORM-1 (PXD & K)916-355-18	1
None	452837700R	STORM-1 (PXD & K)916A355-18	1
3	453154800	Evaporator Assy.	1
5	455000602	Capacitor With Screw for fan motor	1
15	484002	AIR INLET ASSY (BIG)	1

13.9 Outdoor Unit: ONG 9, 12 ST



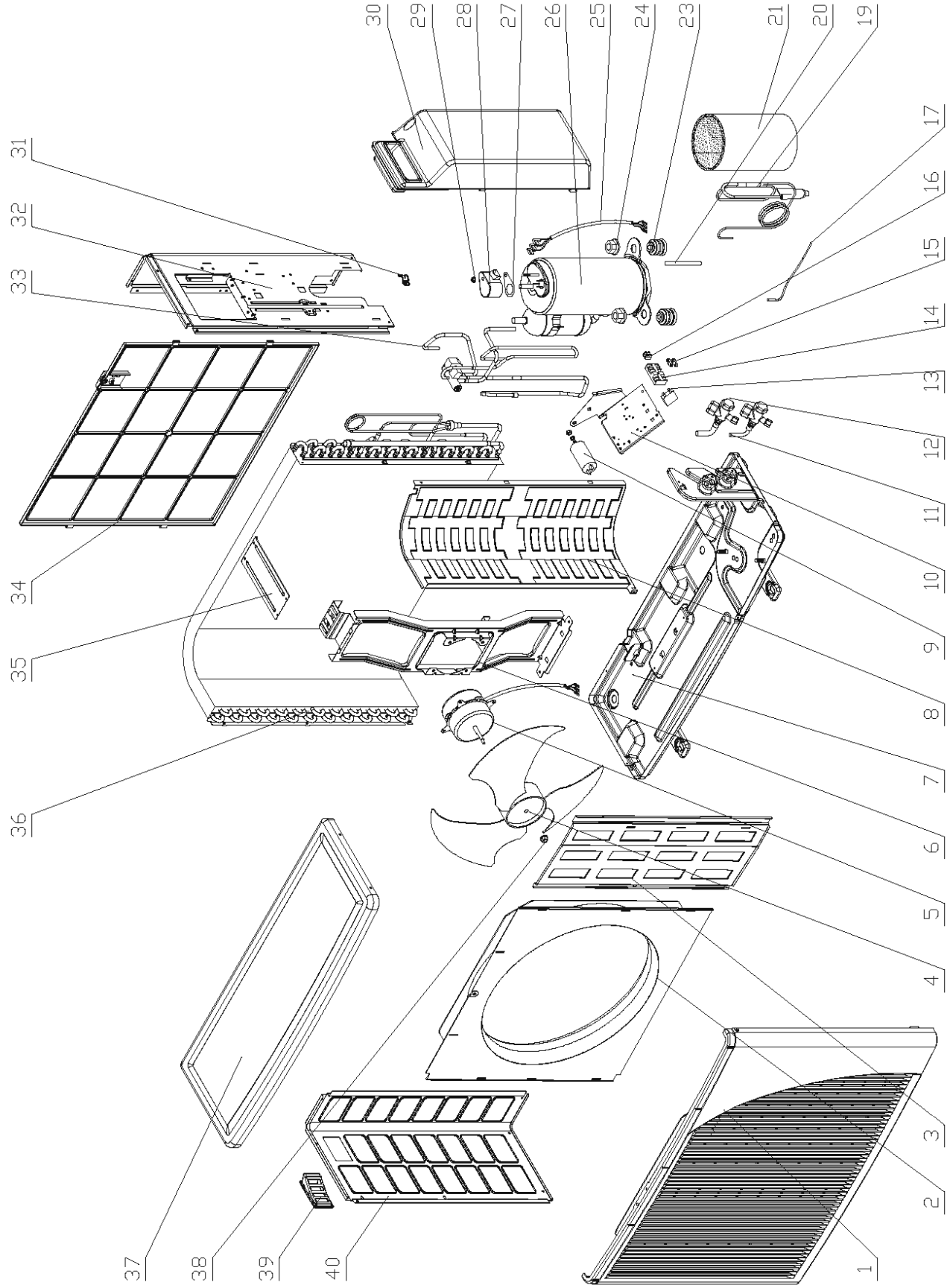
13.10 Outdoor Unit: ONG 9 ST

Item Code	Item Desc	Quantity	Drawing Number	Effective From	Effective To
433218	Front Panel A	1	1	05-Mar-04	Active
433219	Front Panel A1	1	1	05-Mar-04	05-Mar-04
433221	Air Inlet Ring-420	1	2	05-Mar-04	Active
433223	Painting Insulation Plate	1	3	05-Mar-04	Active
4519251	Axial Fan OD=400	1	4	05-Mar-04	Active
4519250	Fan Motor YDK30-6V	1	5	05-Mar-04	Active
433215	Motor Support	1	6	05-Mar-04	05-Mar-04
4527203	Motor Support	1	6	05-Mar-04	Active
4526747	Base Painting Assy.	1	7	05-Mar-04	Active
433217	Partition Plate	1	8	05-Mar-04	Active
455000503	Compressor Capacitor With Screw	1	9	05-Mar-04	Active
4519611	Electric Panel Painting Plate	1	10	05-Mar-04	Active
4524176	1/4 Liqiud Valve(R410A)	1	11	05-Mar-04	Active
4524177	3/8 Gas Valve(R410A)	1	12	05-Mar-04	Active
455000001	single patch Capacitor for fan	1	13	05-Mar-04	Active
4514588	5 Poles terminal block	1	14	05-Mar-04	Active
204107	Cable clip Nylon	1	15	05-Mar-04	Active
4527281	Capillary Assy	1	19	05-Mar-04	Active
4527362	Charge tube TP2 6.35x0.8	1	20	05-Mar-04	Active
452799601	Compressor Jacket ONG3-9	1	21	05-Mar-04	Active
4510677	Nut With Flange M8 -D=24	1	24	05-Mar-04	Active
4527008	Wire assy	1	25	05-Mar-04	Active
4524230	Compressor assy. GK113PAG	1	26	05-Mar-04	Active
4516826	Rubber washer	1	27	05-Mar-04	Active
4516825	Cover Terminal	1	28	05-Mar-04	Active
4514089	Nut hex	1	29	05-Mar-04	Active
433229	cover valve	1	30	05-Mar-04	Active
433234	Clamp	1	31	05-Mar-04	Active
4519606	Right side panel (painting plate)	1	32	05-Mar-04	Active
4527279	Discharge Tube Assy 2 £¨9ST)	1	33	05-Mar-04	Active
4527280	Suction Tube 1	1	34	05-Mar-04	Active
433228	Back Side Net	1	35	05-Mar-04	Active
433216	Bridge	1	36	05-Mar-04	Active
4527155	condensor Soldering assy	1	38	05-Mar-04	Active
4519614	Painting Top Cover	1	39	05-Mar-04	Active
4519300	Nut M5 L	1	40	05-Mar-04	Active
433225	Handle	1	41	05-Mar-04	Active
4519607	Left Side Panel Painting Plate	1	42	05-Mar-04	Active
4514091	Grommet	1	230	05-Mar-04	Active

13.11 Outdoor Unit: ONG 12 ST

Item Code	Item Desc	Quantity	Drawing Number	Effective From	Effective To
433218	Front Panel A	1	1	15-Nov-03	13-Jan-04
433219	Front Panel A1	1	1	13-Jan-04	Active
433221	Air Inlet Ring-420	1	2	15-Nov-03	Active
433223	Painting Insulation Plate	1	3	15-Nov-03	Active
4519251	Axial Fan OD=400	1	4	15-Nov-03	Active
4519692	Fan Motor (810rpm)	1	5	15-Nov-03	Active
433215	Motor Support	1	6	15-Nov-03	16-Feb-04
4527203	Motor Support	1	6	16-Feb-04	Active
4519601	Base Painting Assy.	1	7	15-Nov-03	15-Nov-03
4526747	Base Painting Assy.	1	7	15-Nov-03	16-Feb-04
452772500	Base Plate Painting Assy.	1	7	16-Feb-04	Active
433217	Partition Plate	1	8	15-Nov-03	Active
4517993	Cap. 35uF/450V	1	9	15-Nov-03	29-Dec-03
455000504	Compressor Capacitor With Screw	1	9	29-Dec-03	Active
4519611	Electric Panel Painting Plate	1	10	15-Nov-03	Active
4524176	1/4 Liqiud Valve(R410A)	1	11	15-Nov-03	Active
4524595	1/2 Gas Valve for ONG R410A	1	12	15-Nov-03	13-Jan-04
4524177	3/8 Gas Valve(R410A)	1	12	13-Jan-04	Active
4517990	Cap. 2uF/450V	1	13	15-Nov-03	08-Jan-04
455000001	single patch Capacitor for fan	1	130	08-Jan-04	09-Feb-04
455000108	Double patch Capacitor for fan	1	13	09-Feb-04	Active
4514588	5 Poles terminal block	1	14	15-Nov-03	Active
204107	Cable clip Nylon	1	15	15-Nov-03	Active
236179	2 Poles terminal block	1	16	15-Nov-03	16-Feb-04
4516637	Out sensor Black	1	17	15-Nov-03	16-Feb-04
4525210	Restrictor (031)	1	18	15-Nov-03	13-Jan-04
4524923	Capillary 2.6*1.6*800	1	19	15-Nov-03	13-Jan-04
4526848	Capillary Assy. (OD2.6xID1.6x1000)	1	19	13-Jan-04	Active
4525650	Charge tube	1	20	15-Nov-03	13-Jan-04
4527362	Charge tube TP2 ¦?6.35x0.8	1	20	13-Jan-04	Active
4519600	Compresssor Jacket	1	21	15-Nov-03	13-Jan-04
4527007	Comp. Jacket	1	21	13-Jan-04	16-Feb-04
4527058	Comp. Jacket	1	21	16-Feb-04	Active
4519610	Compressor Isolation. Top Cover	1	22	15-Nov-03	13-Jan-04
4514091	Grommet	3	23	15-Nov-03	15-Nov-03
4516357	Rubber Cushion 1K15910311	3	23	15-Nov-03	Active
4510677	Nut With Flange M8 -D=24	3	24	15-Nov-03	Active
4519987	Wire assy	1	25	15-Nov-03	13-Jan-04
4527008	Wire assy	1	25	13-Jan-04	16-Feb-04
4519987	Wire assy	1	25	16-Feb-04	Active
4524232	Compressor assy. GK151PAD	1	26	15-Nov-03	15-Nov-03
4526452	Comp. Assy GMCC PA145X2C-4FT	1	26	15-Nov-03	Active
4516359	Terminal Packing 1K14720130	1	27	15-Nov-03	Active
4516826	Rubber washer	1	27	15-Nov-03	15-Nov-03
4516358	Terminal Cover 1K14720012	1	28	15-Nov-03	Active
4516825	Cover Terminal	1	28	15-Nov-03	15-Nov-03
4514089	Nut hex	1	29	15-Nov-03	15-Nov-03
4516360	Terminal Nut 1K14300710	1	29	15-Nov-03	Active
433229	Valve Cover	1	30	15-Nov-03	Active
433234	Clamp	1	31	15-Nov-03	Active
4518950	Filter Drier BFK-053S	1	31	15-Nov-03	13-Jan-04
4519606	Right side panel (painting plate)	1	32	15-Nov-03	Active
4526790	Discharge Tube Assy.	1	33	15-Nov-03	Active
4525081	Suction Tube 12.7*0.8*1090	1	42	15-Nov-03	15-Nov-03
4526791	Suction Tube Assy	1	34	15-Nov-03	Active
433228	Back Side Net	1	35	15-Nov-03	Active
433216	Bridge	1	36	15-Nov-03	Active
433235	SPACER A 22*1	1	37	15-Nov-03	16-Feb-04
4525529	condensor Soldering assy	1	47	15-Nov-03	13-Jan-04
4526806	condensor Soldering assy	1	38	13-Jan-04	16-Feb-04
4526804	condensor Soldering assy	1	38	16-Feb-04	Active
4519614	Painting Top Cover	1	39	15-Nov-03	Active
4519300	Nut M5 L	1	40	15-Nov-03	Active
433225	Handle	1	41	15-Nov-03	Active
4519607	Left Side Panel Painting Plate	1	42	15-Nov-03	Active
4525080	Discharge Tube 9.53*0.8*470	1	43	15-Nov-03	15-Nov-03

13.12 Outdoor Unit: ONG 9, 12 RC



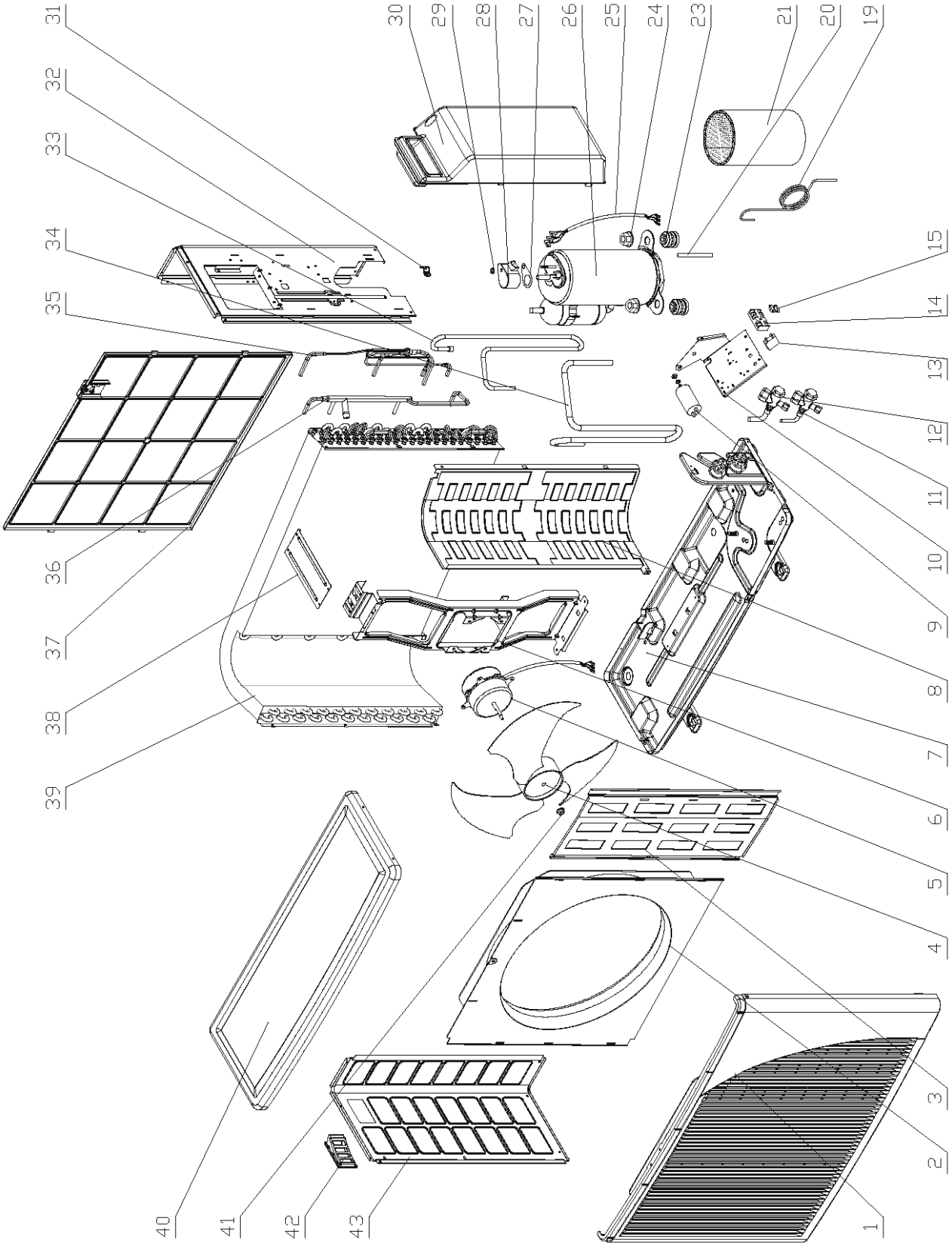
13.13 Outdoor Unit: ONG 9 RC

Item Code	Item Desc	Quantity	Drawing Number	Effective From	Effective To
433218	Front Panel A	1	1	05-Mar-04	Active
433219	Front Panel A1	1	1	05-Mar-04	05-Mar-04
433221	Air Inlet Ring-420	1	2	05-Mar-04	Active
433223	Painting Insulation Plate	1	3	05-Mar-04	Active
4519251	Axial Fan OD=400	1	4	05-Mar-04	Active
4519250	Fan Motor YDK30-6V	1	5	05-Mar-04	Active
4527203	Motor Support	1	6	05-Mar-04	Active
4526747	Base Painting Assy.	1	7	05-Mar-04	Active
433217	Partition Plate	1	8	05-Mar-04	Active
455000503	Compressor Capacitor With Screw	1	9	05-Mar-04	Active
4519611	Electric Panel Painting Plate	1	10	05-Mar-04	Active
4524176	1/4 Liqiud Valve(R410A)	1	11	05-Mar-04	Active
4524177	3/8 Gas Valve(R410A)	1	12	05-Mar-04	Active
455000108	Double patch Capacitor for fan	1	13	05-Mar-04	Active
4514588	5 Poles terminal block	1	14	05-Mar-04	Active
204107	Cable clip Nylon	1	15	05-Mar-04	Active
236179	2 Poles terminal block	1	16	05-Mar-04	Active
4516637	Out sensor Black	1	17	05-Mar-04	Active
4527444	Restrictor (029)	1	18	05-Mar-04	11-Mar-04
4527127	Capillary Assy	1	19	05-Mar-04	Active
4527362	Charge tube TP2 6.35x0.8	1	20	05-Mar-04	Active
452799601	Compressor Jacket ONG3-9	1	21	05-Mar-04	Active
4514091	Grommet	1	23	05-Mar-04	Active
4510677	Nut With Flange M8 -D=24	1	24	05-Mar-04	Active
4527008	Wire assy	1	25	05-Mar-04	Active
4524230	Compressor assy. GK113PAG	1	26	05-Mar-04	Active
4516826	Rubber washer	1	27	05-Mar-04	Active
4516825	Cover Terminal	1	28	05-Mar-04	Active
4514089	Nut hex	1	29	05-Mar-04	Active
433229	cover valve	1	30	05-Mar-04	Active
433234	Clamp	1	31	05-Mar-04	Active
4519606	Right side panel (painting plate)	1	32	05-Mar-04	Active
4527135	4-Way Valve & Tube Assy	1	33	05-Mar-04	Active
433228	Back Side Net	1	34	05-Mar-04	Active
433216	Bridge	1	35	05-Mar-04	Active
4527155	condensor Soldering assy	1	36	05-Mar-04	Active
4519614	Painting Top Cover	1	37	05-Mar-04	Active
4519300	Nut M5 L	1	38	05-Mar-04	Active
433225	Handle	1	39	05-Mar-04	Active
4519607	Left Side Panel Painting Plate	1	40	05-Mar-04	Active

13.14 Outdoor Unit: ONG 12 RC

Item Code	Item Desc	Quantity	Drawing Number	Effective From	Effective To
433218	Front Panel A	1	1	05-Mar-04	Active
433219	Front Panel A1	1	1	05-Mar-04	05-Mar-04
433221	Air Inlet Ring-420	1	2	05-Mar-04	Active
433223	Painting Insulation Plate	1	3	05-Mar-04	Active
4519251	Axial Fan OD=400	1	4	05-Mar-04	Active
4519692	Fan Motor (810rpm)	1	5	05-Mar-04	12-Mar-04
4526591	Motor YYK30Z-6	1	5	12-Mar-04	Active
4527203	Motor Support	1	6	05-Mar-04	Active
452772500	Base Plate Painting Assy.	1	7	05-Mar-04	12-Mar-04
4526747	Base Painting Assy.	1	7	12-Mar-04	Active
433217	Partition Plate	1	8	05-Mar-04	Active
455000504	Compressor Capacitor With Screw	1	9	05-Mar-04	12-Mar-04
455000502	Compressor Capacitor 35uF With Screw	1	9	12-Mar-04	Active
4519611	Electric Panel Painting Plate	1	10	05-Mar-04	Active
4524176	1/4 Liqiud Valve(R410A)	1	11	05-Mar-04	Active
4524177	3/8 Gas Valve(R410A)	1	12	05-Mar-04	Active
455000108	Double patch Capacitor for fan	1	13	05-Mar-04	12-Mar-04
455000000	single patch Capacitor for fan	1	13	12-Mar-04	Active
4514588	5 Poles terminal block	1	14	05-Mar-04	Active
204107	Cable clip Nylon	1	15	05-Mar-04	Active
236179	2 Poles terminal block	1	16	05-Mar-04	Active
4516637	Out sensor Black	1	17	05-Mar-04	Active
4526847	Valve-Capillary Assy	1	19	05-Mar-04	12-Mar-04
4526617	one way valve soldering	1	19	12-Mar-04	Active
4527362	Charge tube TP2	1	20	05-Mar-04	Active
4527058	Comp. Jacket	1	21	05-Mar-04	12-Mar-04
452799600	Compressor Jacket ONG3-7	1	21	12-Mar-04	Active
4516357	Rubber Cushion 1K15910311	3	23	05-Mar-04	12-Mar-04
4514091	Grommet	3	23	12-Mar-04	Active
4510677	Nut With Flange M8 -D=24	3	24	05-Mar-04	Active
4519987	Wire assy	1	25	05-Mar-04	12-Mar-04
4527375	Compressor Wire	1	25	12-Mar-04	Active
4526452	Comp. Assy GMCC PA145X2C-4FT	1	26	05-Mar-04	12-Mar-04
4526578	Compressor Assy. LG GK086P	1	26	12-Mar-04	Active
4526601	Compressor LG GK086P	1	26	12-Mar-04	12-Mar-04
4516359	Terminal Packing 1K14720130	1	27	05-Mar-04	12-Mar-04
4514088	Gasket	1	27	12-Mar-04	Active
4516358	Terminal Cover 1K14720012	1	28	05-Mar-04	12-Mar-04
4516824	Cover Terminal	1	28	12-Mar-04	Active
4516360	Terminal Nut 1K14300710	1	29	05-Mar-04	12-Mar-04
4514089	Nut hex	1	29	12-Mar-04	Active
433229	Valve Cover	1	30	05-Mar-04	Active
433234	Clamp	1	31	05-Mar-04	Active
4519606	Right side panel (painting plate)	1	32	05-Mar-04	Active
4526745	4-way Valve Welding Assy.	1	33	05-Mar-04	12-Mar-04
4526604	4-way Valve Welding Assy.	1	33	12-Mar-04	Active
4527308	PCB Support	1	34	11-Mar-04	Active
4526748	Low-Temp. Controller	1	35	11-Mar-04	Active
433228	Back Side Net	1	36	05-Mar-04	Active
433216	Bridge	1	37	05-Mar-04	Active
4526804	condensor Soldering assy	1	38	05-Mar-04	12-Mar-04
4526605	condensor Soldering assy	1	38	12-Mar-04	Active
4519614	Painting Top Cover	1	39	05-Mar-04	Active
4519300	Nut M5 L	1	40	05-Mar-04	Active
433225	Handle	1	41	05-Mar-04	Active
4519607	Left Side Panel Painting Plate	1	42	05-Mar-04	Active
4516114	2-W Valve coil	1	43	11-Mar-04	Active

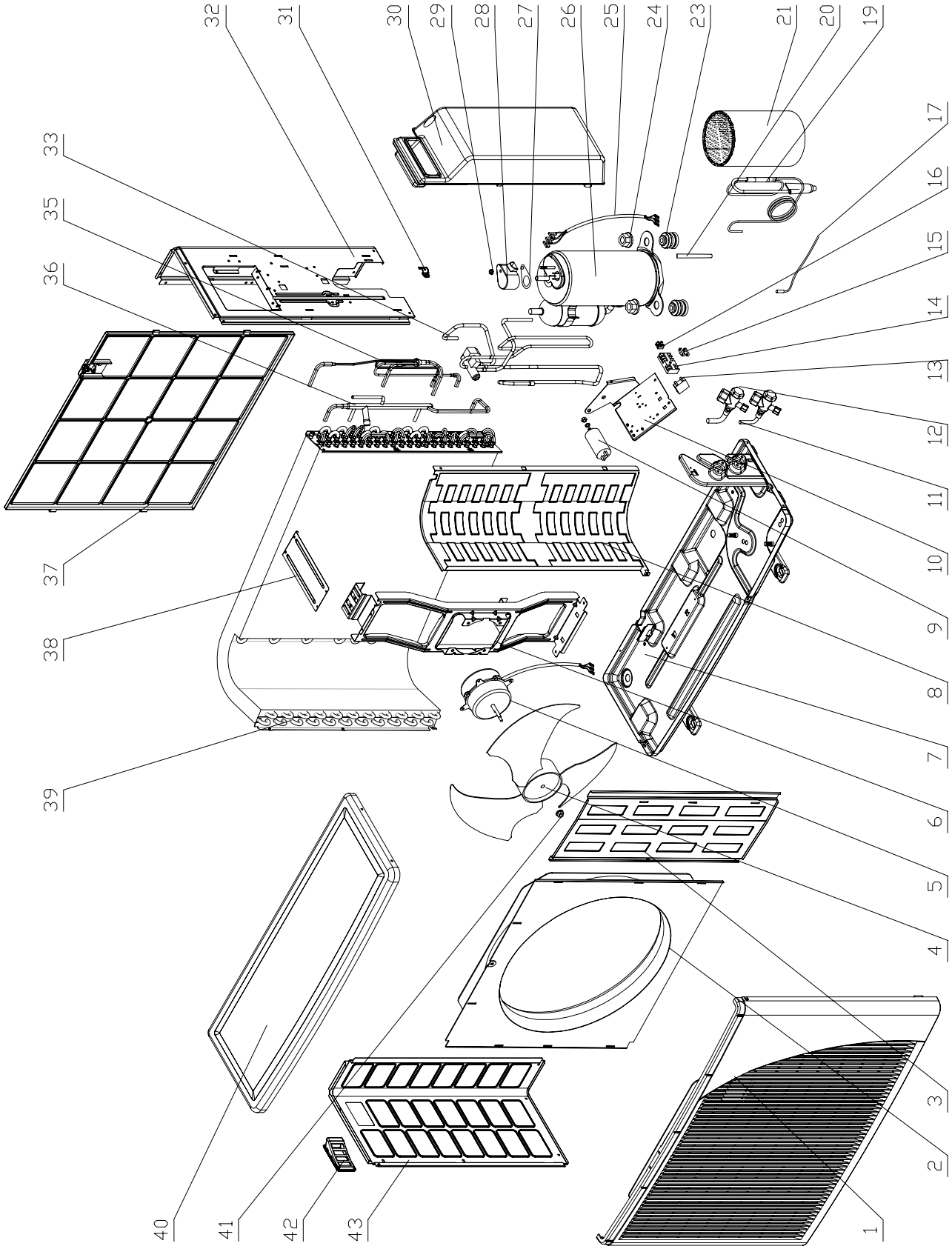
13.15 Outdoor Unit: ONG 14 ST



13.16 Outdoor Unit: ONG 14 ST

Item Code	Item Desc	Quantity	Drawing Number	Effective From	Effective To
433219	Front Panel A1	1	1	01-Mar-04	15-Mar-04
433218	Front Panel A	1	1	15-Mar-04	Active
433221	Air Inlet Ring-420	1	2	01-Mar-04	Active
433223	Painting Insulation Plate	1	3	01-Mar-04	Active
4519251	Axial Fan OD=400	1	4	01-Mar-04	Active
4520171	Fan Motor (910rpm)	1	5	01-Mar-04	Active
4527203	Motor Support	1	6	01-Mar-04	Active
4527255	Base Painting Assy.	1	7	01-Mar-04	Active
4527202	Partition Plate	1	8	01-Mar-04	Active
455000503	Compressor Capacitor With Screw	1	9	01-Mar-04	Active
4519611	Electric Panel Painting Plate	1	10	01-Mar-04	Active
4524176	1/4 Liqiud Valve(R410A)	1	11	01-Mar-04	Active
4524595	1/2 Gas Valve for ONG R410A	1	12	01-Mar-04	Active
455000108	Double patch Capacitor for fan	1	13	01-Mar-04	Active
4514588	5 Poles terminal block	1	14	01-Mar-04	Active
204107	Cable clip Nylon	1	15	01-Mar-04	Active
236179	2 Poles terminal block	1	16	01-Mar-04	Active
4516637	Out sensor Black	1	17	01-Mar-04	Active
4526918	Valve & Capillary Assy	1	19	01-Mar-04	01-Mar-04
4526919	Capillary Assy ID1.6x600	1	19	01-Mar-04	Active
4527362	Charge tube TP2 ¦?6.35x0.8	1	20	01-Mar-04	Active
4527058	Comp. Jacket	1	21	01-Mar-04	Active
4527287	Grommet	3	23	01-Mar-04	Active
4510677	Nut With Flange M8 -D=24	3	24	01-Mar-04	Active
4519987	Wire assy	1	25	01-Mar-04	Active
4526453	Compressor Assy. RN165VHSMT	1	26	01-Mar-04	Active
4527289	Terminal Packing	1	27	01-Mar-04	Active
4527285	Terminal Cover SC01D024	1	28	01-Mar-04	Active
4527286	Terminal Nut	1	29	01-Mar-04	Active
433229	valve cover	1	30	01-Mar-04	Active
433234	Clamp	1	31	01-Mar-04	Active
4519606	Right side panel (painting plate)	1	32	01-Mar-04	Active
4526794	4-way Valve Welding Assy.	1	33	01-Mar-04	01-Mar-04
4526797	Discharge Tube Assy.	1	33	01-Mar-04	Active
4526798	ASuction Tube A	1	34	01-Mar-04	Active
4526911	Distribution Capillary Assy	1	35	01-Mar-04	Active
4526903	Collection tube Assy	1	36	01-Mar-04	Active
433228	Back Side Net	1	37	01-Mar-04	Active
433216	Bridge	1	38	01-Mar-04	Active
4526808	condensor assy	1	39	01-Mar-04	01-Mar-04
4526809	condensor assy	1	39	01-Mar-04	25-Aug-04
4526796	condensor Soldering assy	1	39	25-Aug-04	Active
4519614	Painting Top Cover	1	40	01-Mar-04	Active
4519300	Nut M5 L	1	41	01-Mar-04	Active
433225	Handle	1	42	01-Mar-04	Active
4519607	Left Side Panel Painting Plate	1	43	01-Mar-04	Active

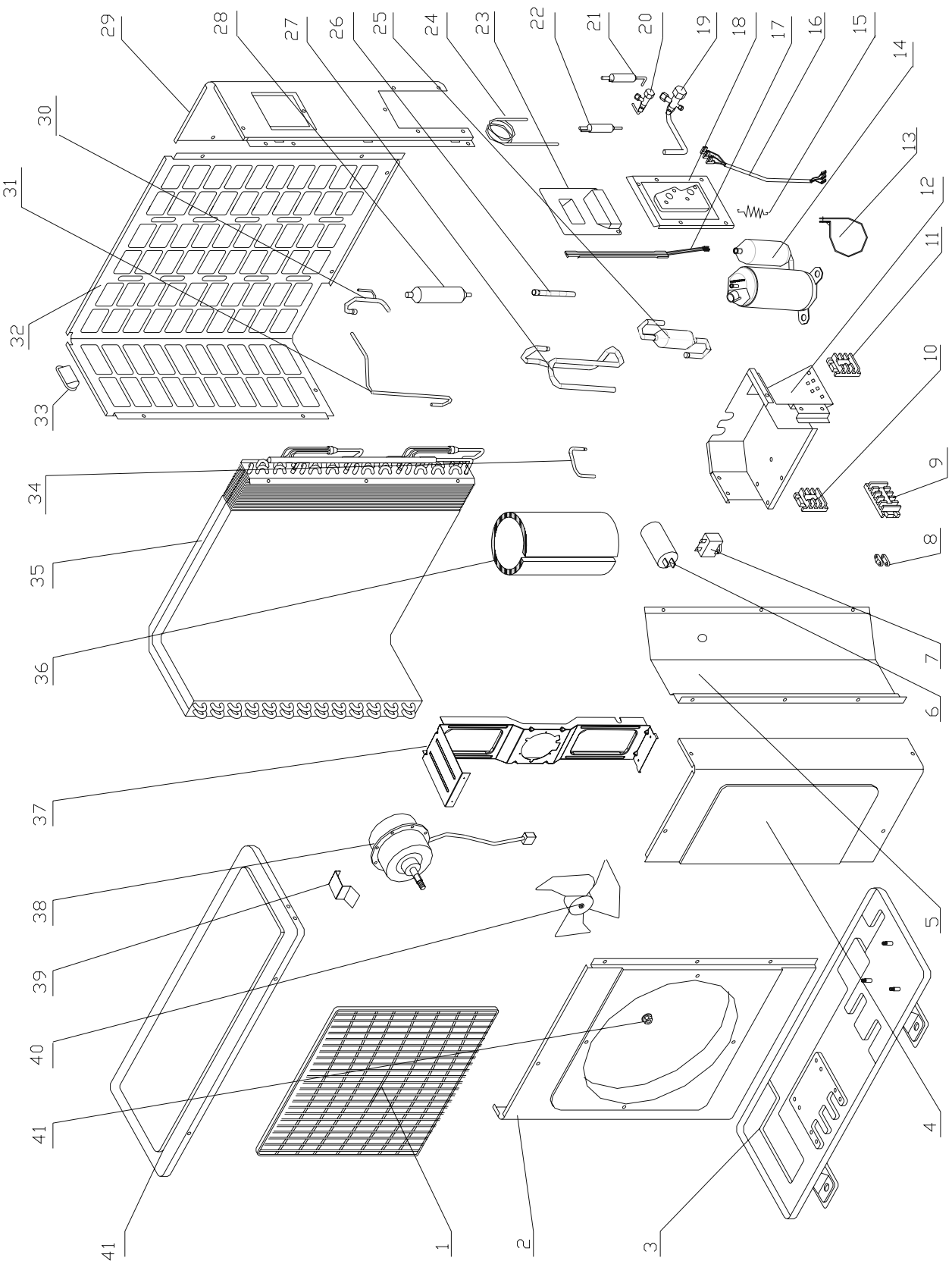
13.17 Outdoor Unit: ONG 14 RC



13.18 Outdoor Unit: ONG 14 RC

No.	Item Code	Item Desc	Qty
1	433219	Front Panel A1	1
1	433218	Front Panel A	1
2	433221	Air Inlet Ring-420	1
3	433223	Painting Insulation Plate	1
4	4519251	Axial Fan OD=400	1
5	4519692	Fan Motor (810rpm)	1
5	4520171	Fan Motor (910rpm)	1
6	4527203	Motor Support	1
7	452772500	Base Plate Painting Assy.	1
7	4527255	Base Painting Assy.	1
8	433217	Partition Plate	1
8	4527202	Partition Plate	1
9	455000504	Compressor Capacitor With Screw	1
9	455000503	Compressor Capacitor With Screw	1
10	4519611	Electric Panel Painting Plate	1
10	453013500	Electric Panel Painting Plate	1
11	4524176	1/4 Liqiud Valve(R410A)	1
12	4524177	3/8 Gas Valve(R410A)	1
12	4524595	1/2 Gas Valve for ONG R410A	1
13	455000108	Double patch Capacitor for fan	1
14	4514588	5 Poles terminal block	1
15	204107	Cable clip Nylon	1
16	236179	2 Poles terminal block	1
17	4516637	Out sensor Black	1
19	4526847	Valve-Capillary Assy	1
19	4526918	Valve & Capillary Assy	1
20	4527362	Charge tube TP2 ¦?6.35x0.8	1
21	4527058	Comp. Jacket	1
23	4516357	Rubber Cushion 1K15910311	3
23	4527287	Grommet	3
24	4510677	Nut With Flange M8 -D=24	3
25	4519987	Wire assy	1
26	4526452	Comp. Assy GMCC PA145X2C-4FT	1
26	4526453	Compressor Assy. RN165VHSMT	1
27	4516359	Terminal Packing 1K14720130	1
27	4527289	Terminal Packing	1
28	4516358	Terminal Cover 1K14720012	1
28	4527285	Terminal Cover SC01D024	1
29	4516360	Terminal Nut 1K14300710	1
29	4527286	Terminal Nut	1
30	433229	Valve Cover	1
31	433234	Clamp	1
32	4519606	Right side panel (painting plate)	1
33	4526745	4-way Valve Welding Assy.	1
33	4526794	4-way Valve Welding Assy.	1
35	4526911	Distribution Capillary Assy	1
36	4526903	Collection tube Assy	1
37	433228	Back Side Net	1
38	433216	Bridge	1
38	4526804	condensor Soldering assy	1
38	4526298	Bridge	1
39	4526808	condensor assy	1
39	4526793	condensor Soldering assy	1
40	4519614	Painting Top Cover	1
41	4519300	Nut M5 L	1
42	433225	Handle	1
43	4519607	Left Side Panel Painting Plate	1

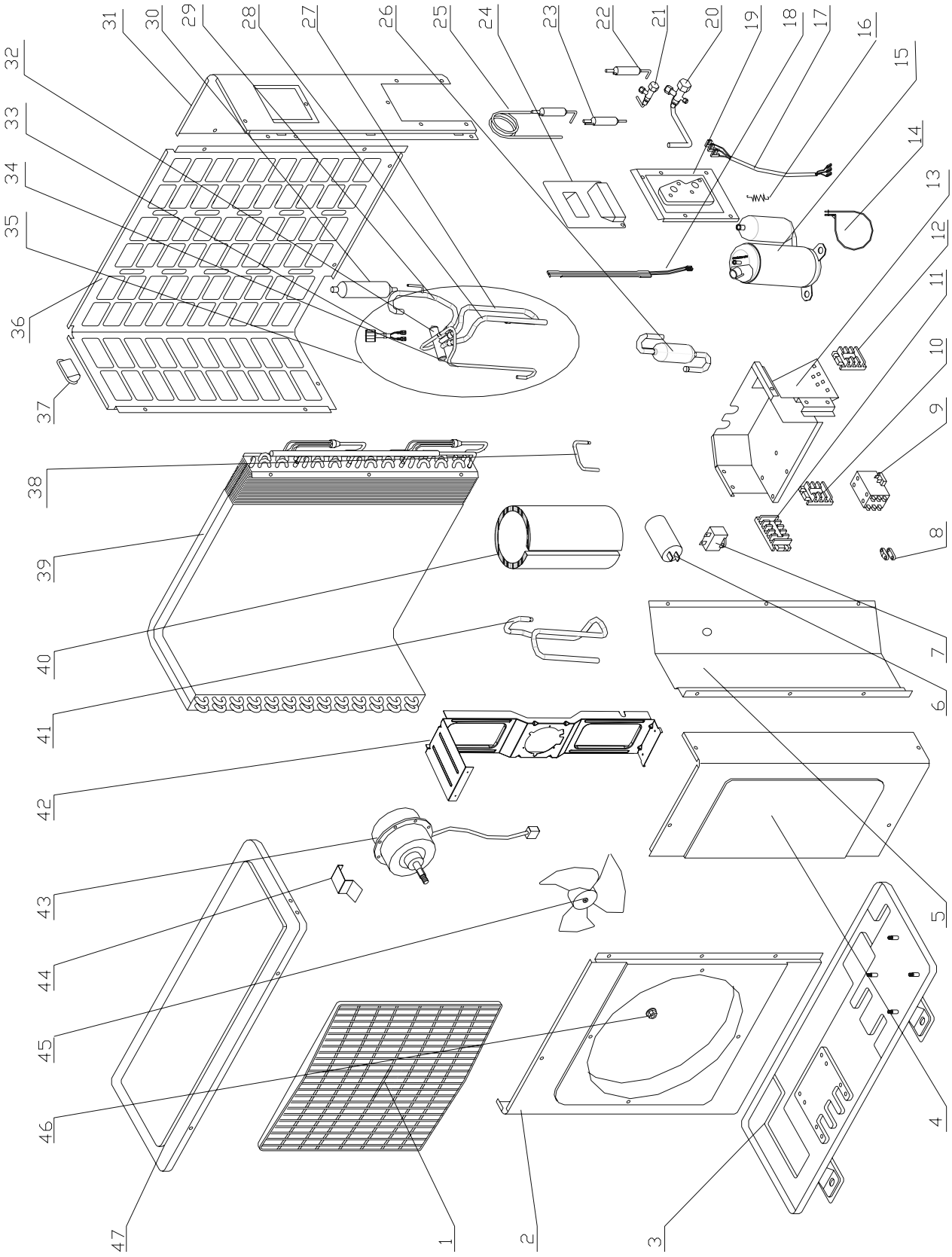
13.19 Outdoor Unit: GC 18 ST



13.20 Indoor Unit: GC 18 ST

NO.	Part No.	Description	Quantity
1	4517144	FAN COVER PP+UV	1
2	452795700	PAINTED LEFT CABINET ASSY	1
3	452989200	Base welding plate assy.	1
4	4516786	PAINTED RIGHT CABINET ASSY	1
5	4516985	Partition Plate	1
6	455000506	Compressor Capacitor With Screw 45uF (CBB65)	1
7	455000104	Double patch Capacitor for fan motor 4uF (CBB61S)	1
8	204107	Cable clip Nylon	2
9	4521744	3 Poles Terminal Block (4mm2)	1
10	4522469	4 LEVEL TERMINAL BLOCK	1
11	4521733	3 Poles Terminal Block (6mm2)	1
12	4521340	Controller Box	1
13	4525427	Clip for capacitance(d=50)	1
14	453089900	Compressor Assy.PA200X2CS-4KU1	1
15	4519000	Spring of compressor heater	1
16	4517345	COMPRESSOR WIRE ASSY. 2.5mm2	1
17	4526922	heater for compressor	1
18	4516766	PAINTED VALVE PLATE ASSY	1
19	4526530	LOW PRESS VALVE (R410A)	1
20	4526531	High press valve(R410A)	1
21	4526931	filter welding assy. 2	1
22	4526839	filter welding assy.	1
23	4523145	R.lifter	1
24	452821900	Capillary assy. for cooling	1
25	4523338	Accumulator assy.	1
26	452977200	Low pressure pipe	1
27	452976200	Suction pipe 1	1
28	4526291	Muffler	1
29	4525938	PAINTED RIGHT-BACK CABINET ASSY	1
30	452977000	Condenser pipe assy.	1
31	452976800	Discharge pipe 2	1
32	4517028	PAINTED LEFT-BACK GRILL	1
33	4516758	SMALL HANDLE	1
34	452976000	Discharge pipe 1	1
35	452821300	Condenser-Distributing Soldering Assy.GC-18ST R410A	1
36	452988800	Insulation for compressor PA215/240	1
37	4526509	MOTOR BRAKECT (new)	1
38	4526864	motor YYK85E-6	1
39	4526585	connect for motor backet	1
40	4526510	FAN D=460mm (3 blade)	1
41	4523141	Hexagon locked nut M10	1
42	4516788	PAINTED TOP COVER ASSY	1

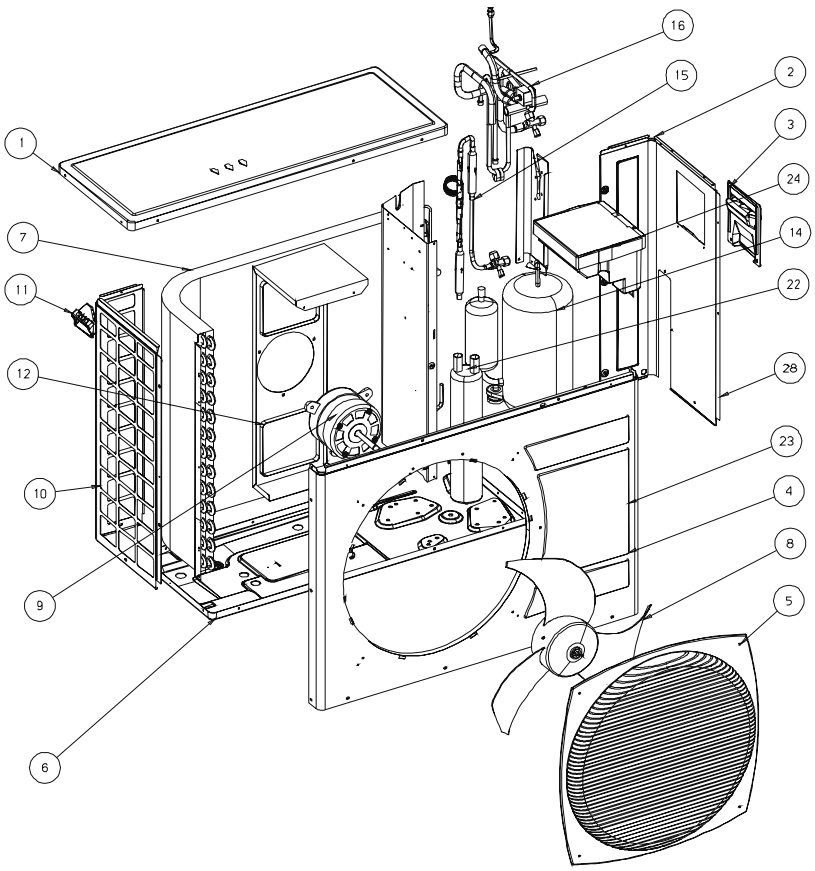
13.21 Outdoor Unit: GC 18 RC

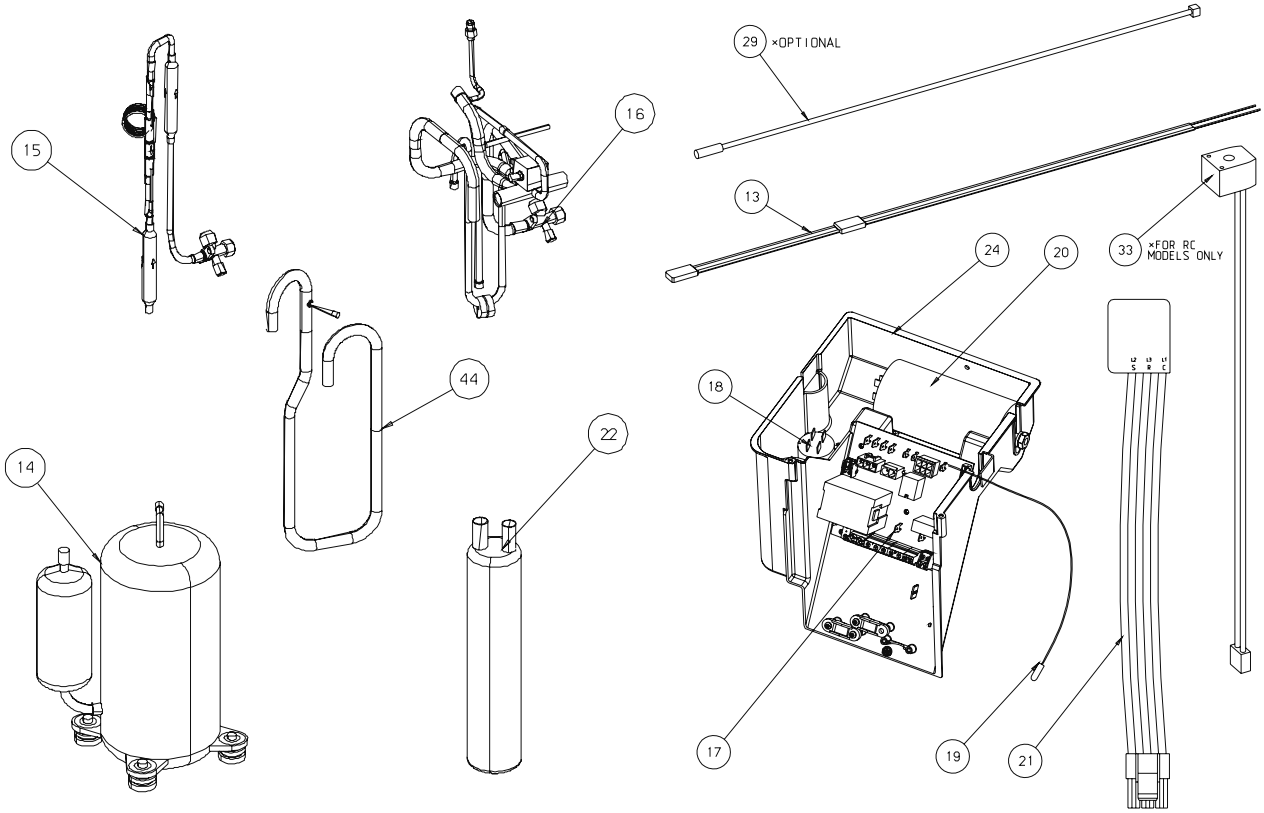


13.22 Outdoor Unit: GC 18 RC

NO.	Part No.	Description	Quantity
1	4517144	COVER PP+UV	1
2	452795700	PAINTED LEFT CABINET ASSY	1
3	452989200	Base welding plate assy.	1
4	4516786	PAINTED RIGHT CABINET ASSY	1
5	4516985	Partition Plate	1
6	455000506	Compressor Capacitor With Screw 45uF (CBB65)	1
7	455000104	Double patch Capacitor for fan motor 4uF (CBB61S)	1
8	204107	Cable clip Nylon	2
9	4524907	contactor (CJX9B-25S/01)	1
10	4521744	3 Poles Terminal Block (4mm2)	1
11	4522469	4 LEVEL TERMINAL BLOCK	1
12	4521733	3 Poles Terminal Block (6mm2)	1
13	4521340	Controller Box	1
14	4525427	Clip for capacitance(d=50)	1
15	453089900	Compressor Assy.PA200X2CS-4KU1	1
16	4519000	Spring of compressor heater	1
17	4517345	COMPRESSOR WIRE ASSY. 2.5mm2	1
18	4526922	Heater for compressor	1
19	4516766	PAINTED VALVE PLATE ASSY	1
20	4526530	LOW PRESS VALVE (R410A)	1
21	4526531	High press valve(R410A)	1
22	4526931	filter welding assy. 2	1
23	4526839	filter welding assy.	1
24	4523145	R.lifter	1
25	4526840	Single-way welding assy.	1
26	4523338	Accumulator assy.	1
27	452976500	Suction pipe 2	1
28	452976600	Low pressure pipe	1
29	452976400	Condenser pipe assy.	1
30	4526291	Muffler	1
31	4525938	PAINTED RIGHT-BACK CABINET ASSY	1
32	4526522	FOUR-WAY VALVE R410A	1
33	4526589	4-Way Valve Coil FOR R410A	1
34	452976100	Discharge pipe 2	1
35	452987800	4-way welding assy. for GC18RC R410A PA200	1
36	4517028	PAINTED LEFT-BACK GRILL	1
37	4516758	SMALL HANDLE	1
38	452976000	Discharge pipe 1	1
39	452796500	Condenser-Distributing Soldering Assy.GC-18RC R410A	1
40	452988800	Insulation for compressor PA215/240	1
41	452976200	Suction pipe 1	1
42	4526509	MOTOR BRAKECT (new)	1
43	4526862	motor YYK85E-6B for GC18RC	1
44	4526585	connect for motor backet	1
45	4526510	FAN D=460mm (3 blade)	1
46	4523141	M10 Hexagon locked nut M10	1
47	4516788	PAINTED TOP COVER ASSY	1

13.23 Outdoor Unit: OU7-24 RC 1PH

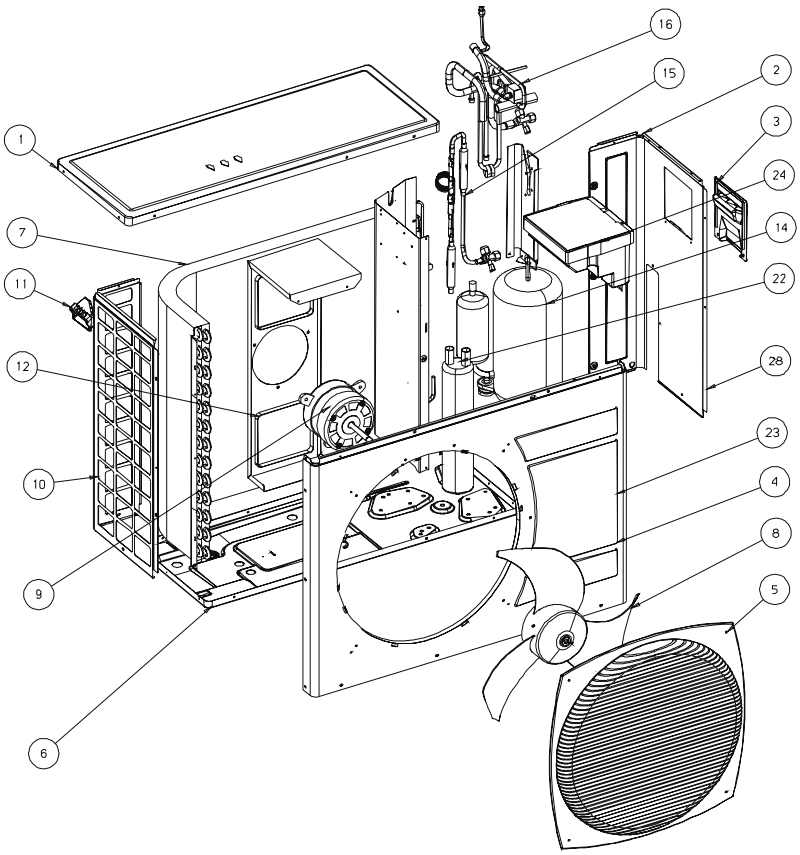


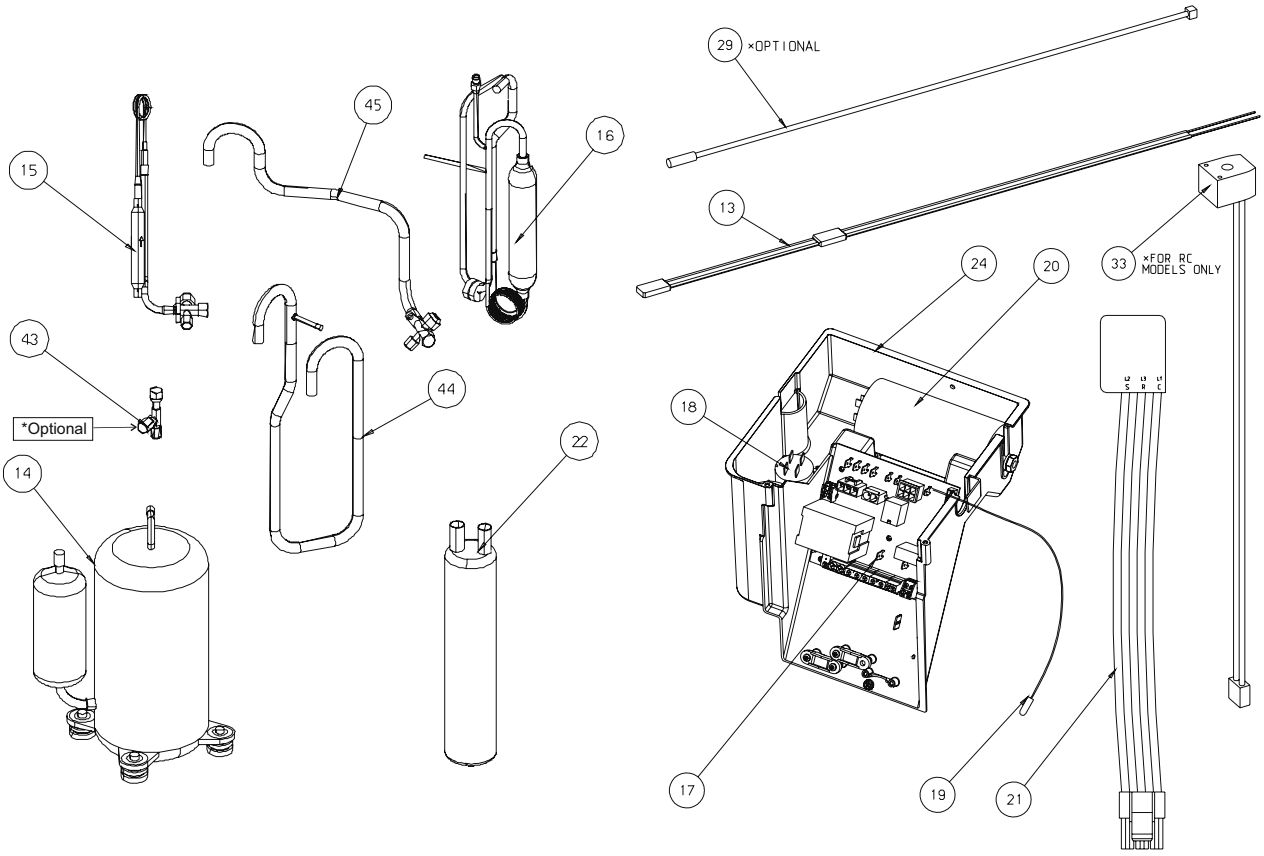


13.24 Outdoor Unit: OU7-24 RC 1PH

No.	SP No.	Part No.	Description	Qty
1	13	190443	HEATER CRANKCASE MITSUBISHI CO	1
2	22	402283	SUCTION ACCUMULATOR 3"x5/8" 3.	1
3	17	402495	BOARD TPHN 5B	1
4	7	433285	COIL OU7-24 HDR	1
5	15	433288	CAPILLARY ASSY OU7-24 R410A	1
6	16	433291	TUBING ASSY OU7 R410A	1
7	14	433293	COMPRESSOR NN27VBAMT	1
8	6	433294	NEW BASE ASSY OU 2005 EXPORT	1
9	44	433816	SUCTION ASSY OU7 R410A	1
10	9	434062	MOTOR 86W,2S,OU7-24	1
11	19	434716	THERMISTOR+CAP WTH CONNECTOR L	1
12	3	436357	SMALL ELECTRICAL COVER OU	1
13	11	436358	OU LEADING HANDLE	1
14	1	437045	UPPER COVER EL13 OU LARGE	1
15	5	437091	OU SQUARE FAN GUARD	1
16	24	437229	ELECTRICAL BOX TPHN	1
17	21	437274	COMPRESOR WIRING OU7/8-1PH MIT	1
18	4	439329	FRONT COVER/COLLECTOR OU7-35/9	1
19	12	439342	MOTOR SUPPORT OU7	1
20	18	442007	CAPACITOR 6mF 400V P1/P2	1
21	20	442016	CAPACITOR 55mF 400V P1/P2	1
22	33	442466	VALVE COIL L700 MOLEX-SANHUA	1
23	8	4529604	AXIAL FAN D493*143	1

13.25 Outdoor Unit: OU7-24 ST 1PH

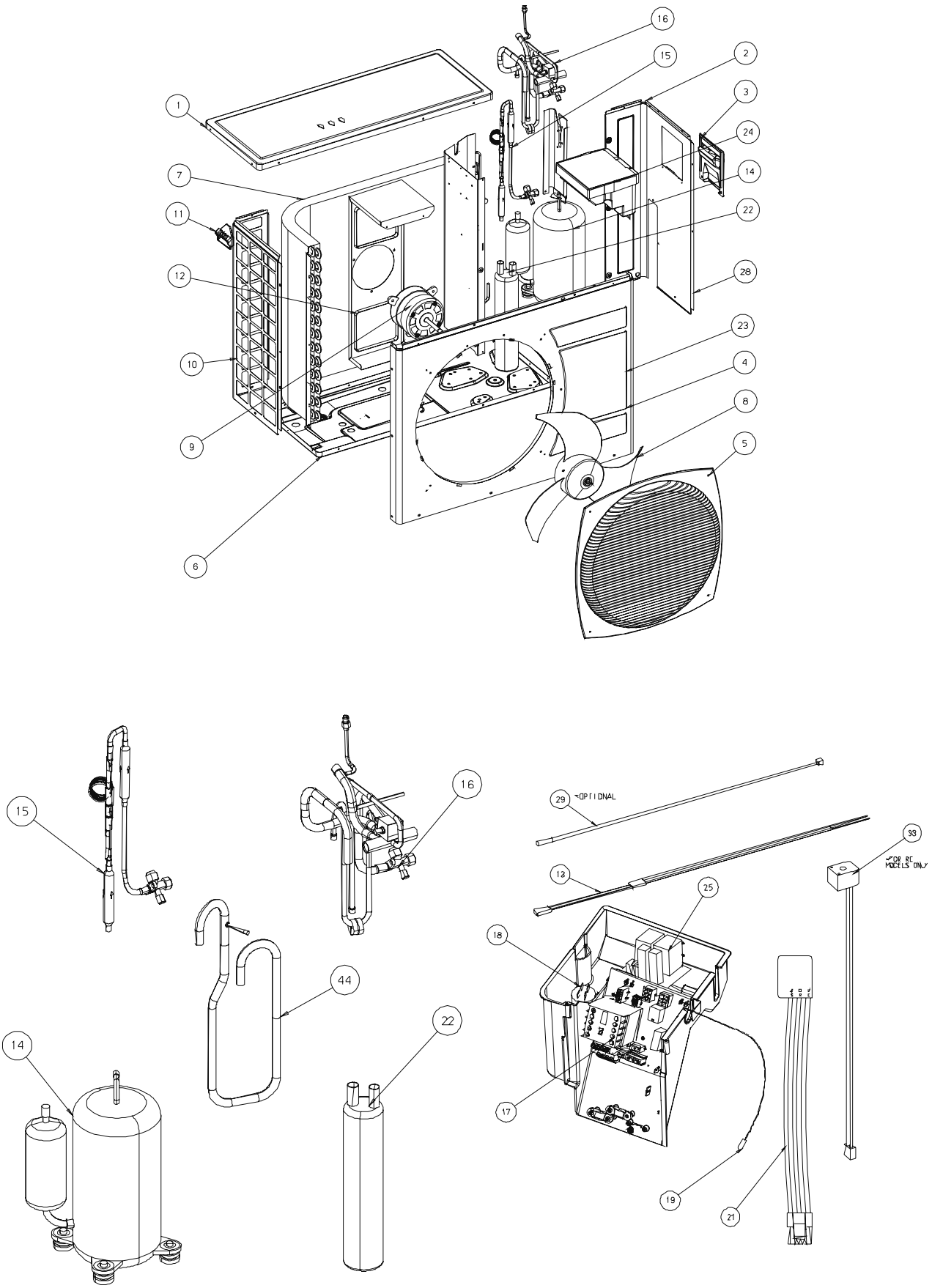




13.26 Outdoor Unit: OU7-24 ST 1PH

No.	SP No.	Part No.	Description	Qty
1	13	190443	HEATER CRANKCASE MITSUBISHI CO	1
2	22	402283	SUCTION ACCUMULATOR 3"x5/8" 3.	1
3	17	402495	BOARD TPHN 5B	1
4	14	433293	COMPRESSOR NN27VBAMT	1
5	6	433705	NEW BASE ASSY OU 2005 LOCAL	1
6	44	433816	SUCTION ASSY OU7 R410A	1
7	16	433817	TUBING ASSY OU7 ST R410A	1
8	15	433845	CAPILLARY ASSY OU7-24 ST R410A	1
9	7	433846	COIL OU7-24 ST	1
10	45	433847	GAS VAVE ASSY OU7 ST R410A	1
11	9	434062	MOTOR 86W,2S,OU7-24	1
12	19	434716	THERMISTOR+CAP WTH CONNECTOR L	1
13	3	436357	SMALL ELECTRICAL COVER OU	1
14	11	436358	OU LEADING HANDLE	1
15	1	437045	UPPER COVER EL13 OU LARGE	1
16	5	437091	OU SQUARE FAN GUARD	1
17	24	437229	ELECTRICAL BOX TPHN	1
18	21	437274	COMPRESOR WIRING OU7/8-1PH MIT	1
19	4	439329	FRONT COVER/COLLECTOR OU7-35/9	1
20	12	439342	MOTOR SUPPORT OU7	1
21	18	442007	CAPACITOR 6mF 400V P1/P2	1
22	20	442016	CAPACITOR 55mF 400V P1/P2	1
23	8	4529604	AXIAL FAN D493*143	1

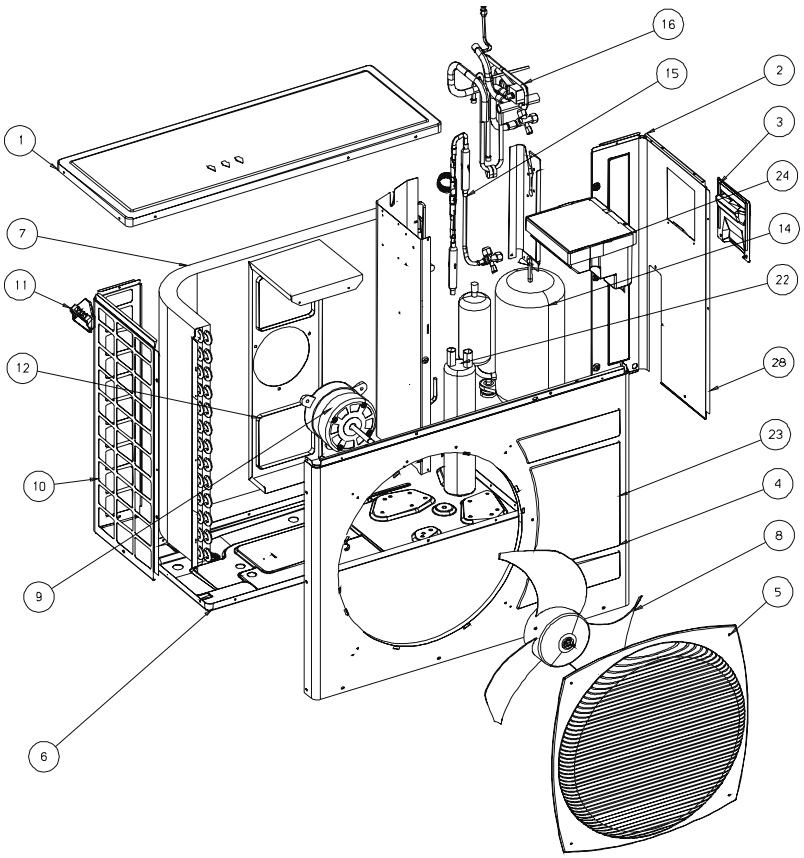
13.27 Outdoor Unit: OU7-24 RC 3PH

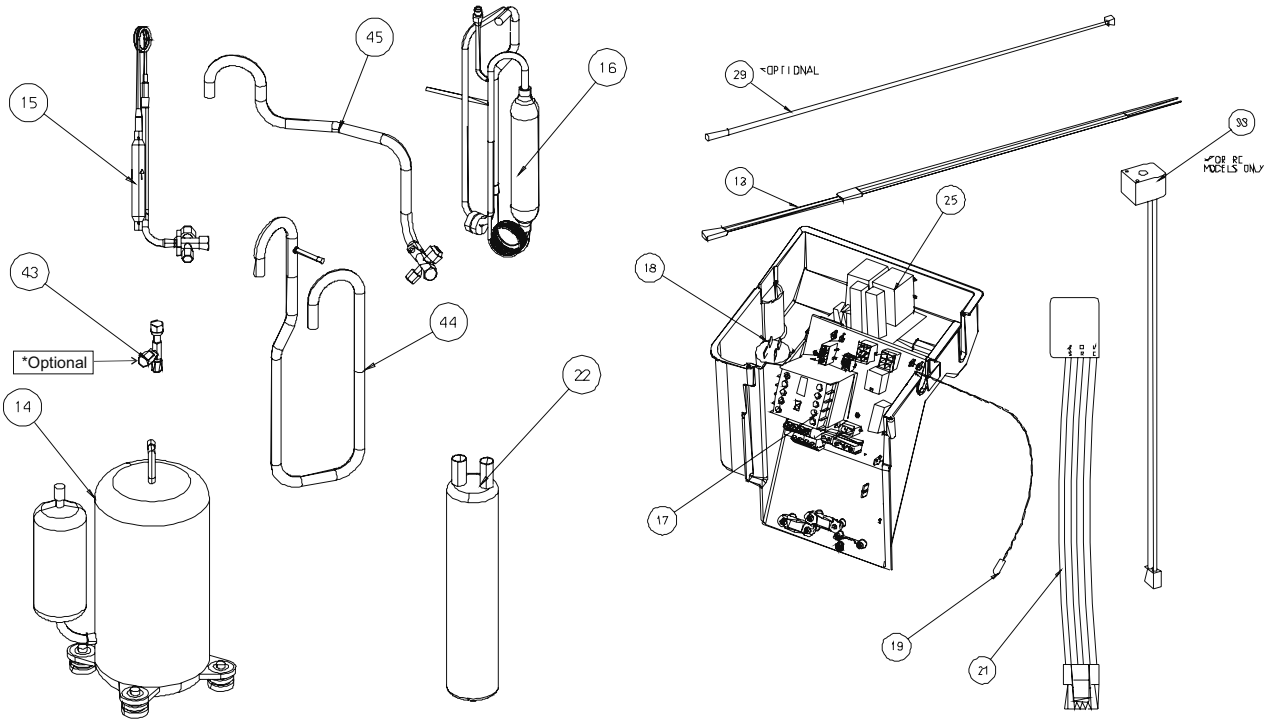


13.28 Outdoor Unit: OU7-24 RC 3PH

No.	SP No.	Part No.	Description	Qty
1	13	190443	HEATER CRANKCASE MITSUBISHI CO	1
2	22	402283	SUCTION ACCUMULATOR 3"x5/8" 3.	1
3	17	402494	BOARD TPHN 3C	1
4	7	433285	COIL OU7-24 HDR	1
5	15	433288	CAPILLARY ASSY OU7-24 R410A	1
6	16	433291	TUBING ASSY OU7 R410A	1
7	6	433294	NEW BASE ASSY OU 2005 EXPORT	1
8	14	433753	COMPRESSOR NN27YDAMT	1
9	44	433816	SUCTION ASSY OU7 R410A	1
10	9	434062	MOTOR 86W,2S,OU7-24	1
11	19	434716	THERMISTOR+CAP WTH CONNECTOR L	1
12	3	436357	SMALL ELECTRICAL COVER OU	1
13	11	436358	OU LEADING HANDLE	1
14	1	437045	UPPER COVER EL13 OU LARGE	1
15	5	437091	OU SQUARE FAN GUARD	1
16	24	437229	ELECTRICAL BOX TPHN	1
17	21	437278	COMPRESSOR WIRING OU7/8-3PH MI	1
18	4	439329	FRONT COVER/COLLECTOR OU7-35/9	1
19	12	439342	MOTOR SUPPORT OU7	1
20	25	439795	3PH MOTOR PROTECTOR	1
21	18	442007	CAPACITOR 6mF 400V P1/P2	1
22	33	442466	VALVE COIL L700 MOLEX-SANHUA	1
23	8	4529604	AXIAL FAN D493*143	1

13.29 Outdoor Unit: OU7-24 ST 3PH

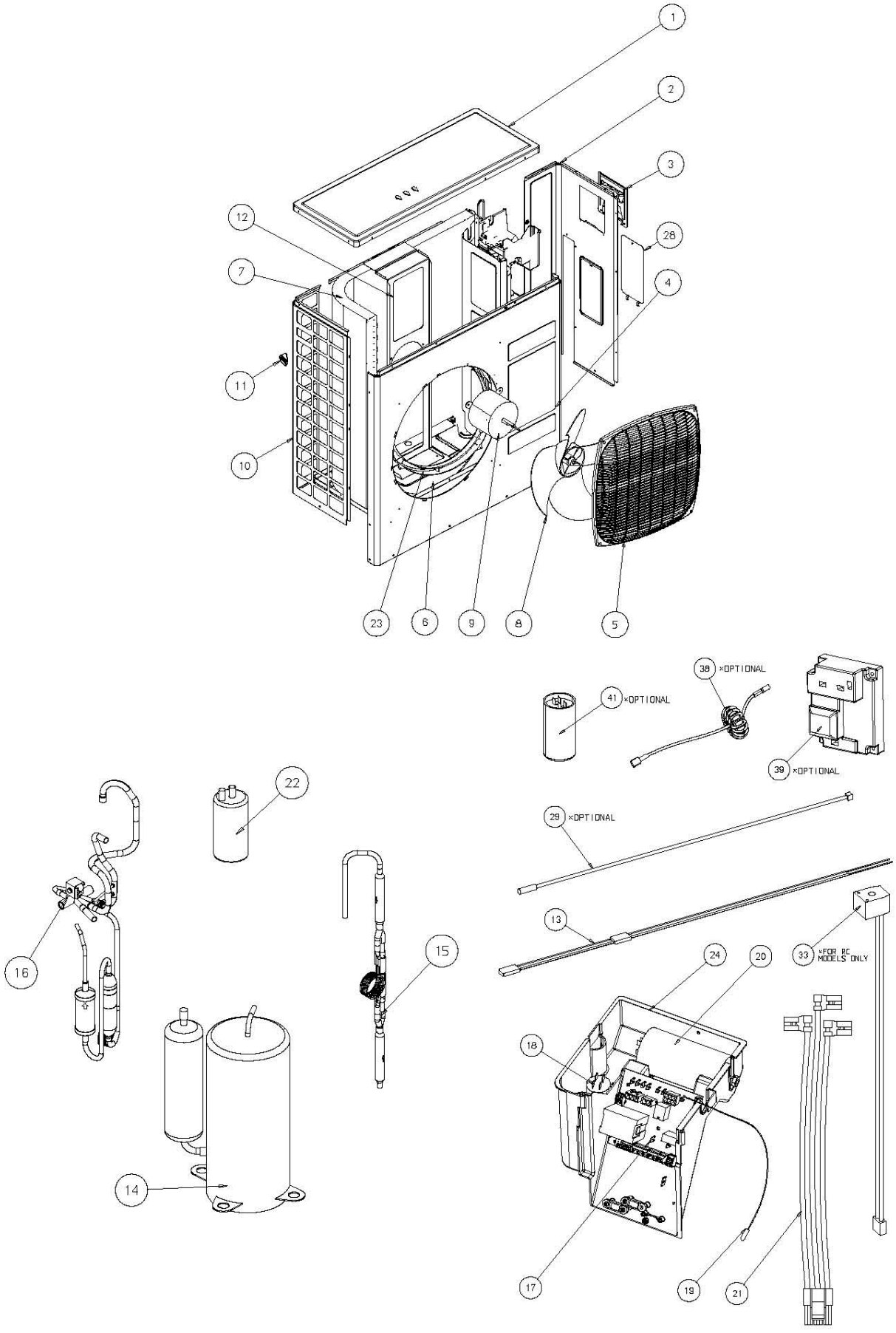




13.30 Outdoor Unit: OU7-24 ST 3PH

No.	SP No.	Part No.	Description	Qty
1	1	437045	LARGE UPPER COVER CUE	1
2	2	433280	SIDE PANEL OU7-24 R410A	1
3	3	436357	SMALL ELECTRICAL COVER CUE	1
4	4	439329	COVERAIR COLLECTOR	1
5	5	437091	OU SQUARE FAN GUARD	1
6	6	433705	NEW BASE ASSY OU 2005 LOCAL R410	1
7	7	433846	COIL OU7-24 ST	1
8	8	4529604	AXIAL FAN D493*143	1
9	9	434062	MOTOR 86W,2S,OU7-24	1
10	10	433281	SIDE GUARD OU7-24 R410	1
11	11	436358	TRANSPORT HANDLE CUE	1
12	12	439342	MOTOR BASE OU7	1
13	13	190443	HEATER CRANKCASE MITSUBISHI COMP	1
14	14	433753	COMPRESSOR NN27YDAMT	1
15	15	433845	CAPILLARY ASSY OU7-24 ST R410A	1
16	16	433817	TUBING ASSY OU7 ST R410A	1
17	17	402494	BOARD TPHN 3C	1
18	18	442007	CAPACITOR 6mF 400V P2	1
19	19	434716	THERMISTOR L1050 (for coil)	1
20	21	437278	MITSUBISHI	1
21	22	402283	R410A	1
22	24	437229	ELECTRICAL BOX TPHN	1
23	25	439795	BOARD 3PH PROTECTOR	1
24	44	433816	SUCTION ASSY OU7 R410A	1
25	45	433847	GAS VAVE ASSY OU7 ST R410A	1

13.31 Outdoor Unit: OU8-30 RC 1PH



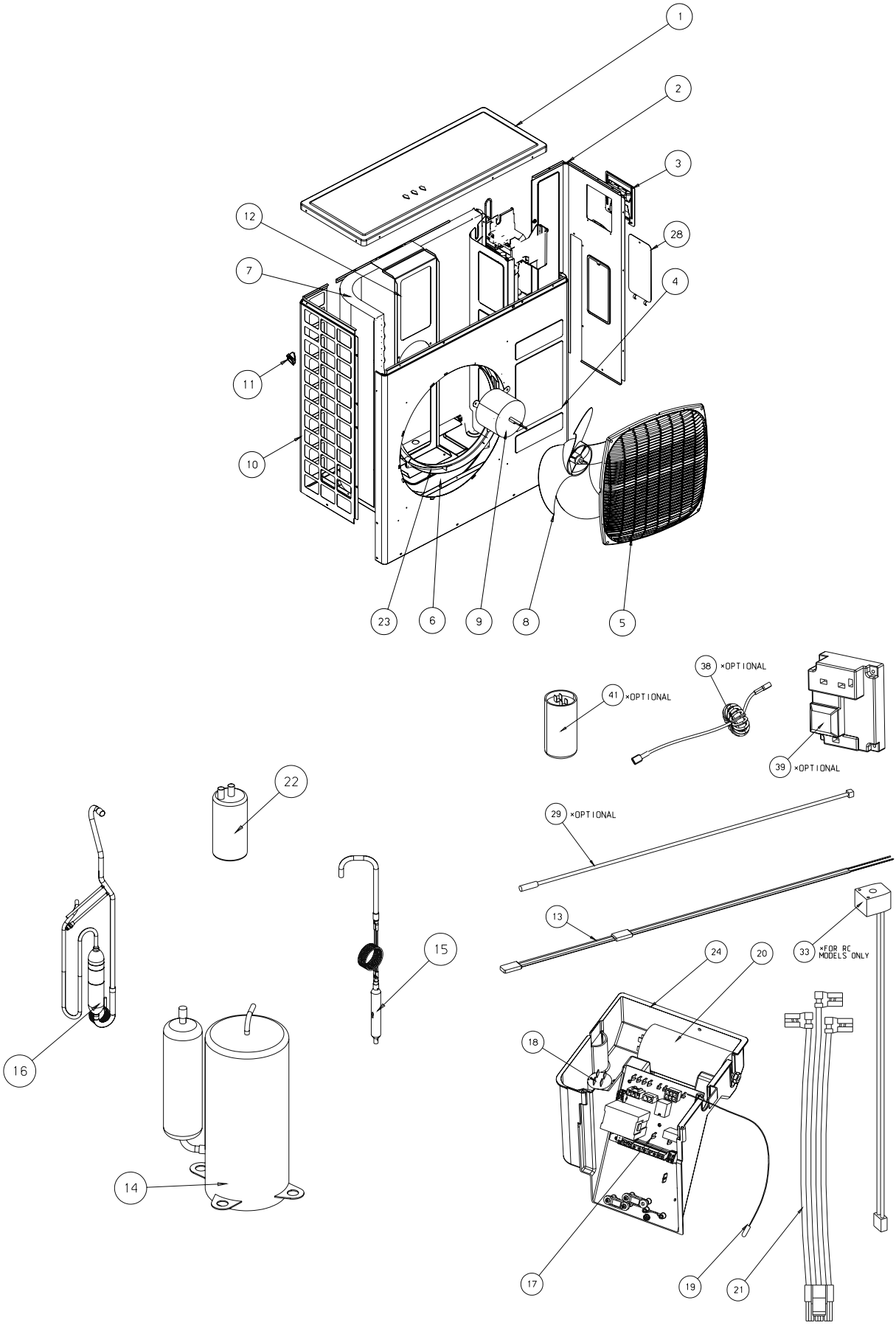
13.32 Outdoor Unit: OU8-30 RC 1PH

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433294	NEW BASE ASSY OU 2005 EXPORT	1	6
433807	COIL OU8-30 GR HDR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433297	COMPRESSOR NN33VAAMT	1	14
433822	CAPILLARY ASSY OU8-30 R410A RC	1	15
433829	TUBING ASSY OU8-30 R410A	1	16
402495	BOARD TPHN 5B	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
442016	CAPACITOR 55mF 400V P1/P2	1	20
437274	COMPRESOR WIRING OU7/8-1PH	1	21
402284	SUCTION ACCUMULATOR 5" x 3/4"	1	22
439928	OUTLET PLASTIC RING OU8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439656	SIDE COVER OU-8/10	1	28
442466	VALVE COIL L700 MOLEX-SANHUA	1	33

13.33 Outdoor Unit: O8-30 RC 1PH Soft Starter

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433294	NEW BASE ASSY OU 2005 EXPORT	1	6
433807	COIL OU8-30 GR HDR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433297	COMPRESSOR NN33VAAMT	1	14
433822	CAPILLARY ASSY OU8-30 R410A RC	1	15
433829	TUBING ASSY OU8-30 R410A	1	16
402495	BOARD TPHN 5B	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
442016	CAPACITOR 55mF 400V P1/P2	1	20
437292	COMPRESSOR WIRING OU7/8-1PH	1	21
402284	SUCTION ACCUMULATOR 5" x 3/4"	1	22
439928	OUTLET PLASTIC RING OU8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439656	SIDE COVER OU-8/10	1	28
442466	VALVE COIL L700 MOLEX-SANHUA	1	33
433607	CHOCK FOR SOFT STARTER	1	38
433296	SOFT STARTER	1	39
442022	SOFT STARTER CAPACITOR 161-193	1	41

13.34 Outdoor Unit: OU8-30 ST 1PH



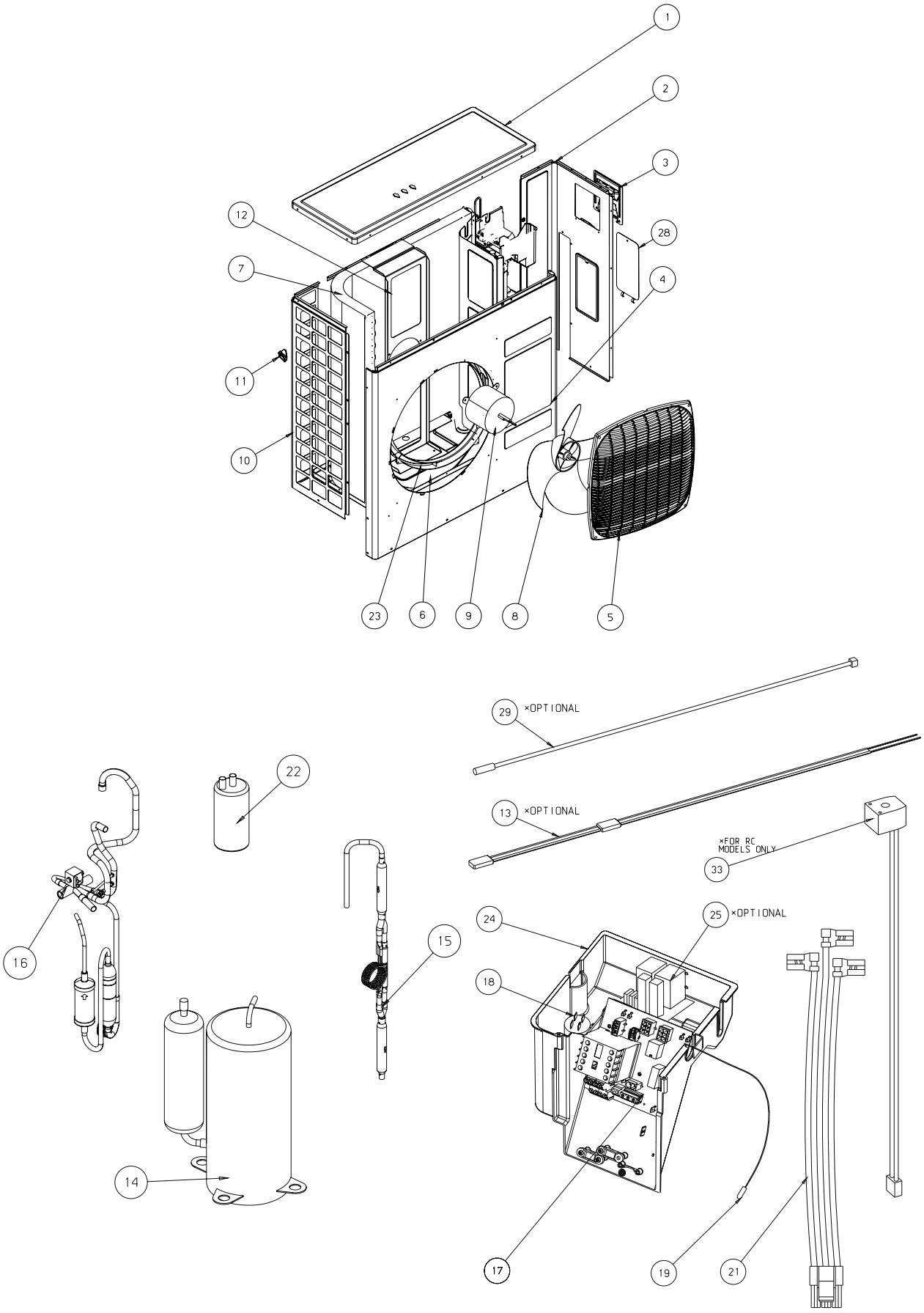
13.35 Outdoor Unit: OOU8-30 ST 1PH

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433705	NEW BASE ASSY OU 2005 LOCAL	1	6
433834	COIL OU8-30 ST GR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433297	COMPRESSOR NN33VAAMT	1	14
433830	CAPILLARY ASSY OU8-30 R410A ST	1	15
433833	TUBING ASSY OU8-30 ST R410A	1	16
402495	BOARD TPHN 5B	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
442016	CAPACITOR 55mF 400V P1/P2	1	20
437274	COMPRESOR WIRING OU7/8-1PH	1	21
402284	SUCTION ACCUMULATOR 5" x 3/4"	1	22
439928	OUTLET PLASTIC RING OU8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439656	SIDE COVER OU-8/10	1	28

13.36 Outdoor Unit: OU8-30 ST 1 PH Soft Starter

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433705	NEW BASE ASSY OU 2005 LOCAL	1	6
433834	COIL OU8-30 ST GR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433297	COMPRESSOR NN33VAAMT	1	14
433830	CAPILLARY ASSY OU8-30 R410A ST	1	15
433833	TUBING ASSY OU8-30 ST R410A	1	16
402495	BOARD TPHN 5B	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
442016	CAPACITOR 55mF 400V P1/P2	1	20
437292	COMPRESSOR WIRING OU7/8-1PH	1	21
402284	SUCTION ACCUMULATOR 5"x3/4"	1	22
439928	OUTLET PLASTIC RING OU 8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439656	SIDE COVER OU-8/10	1	28
433607	CHOCK FOR SOFT STARTER	1	38
433296	SOFT STARTER	1	39
442022	SOFT STARTER CAPACITOR 161-193	1	41

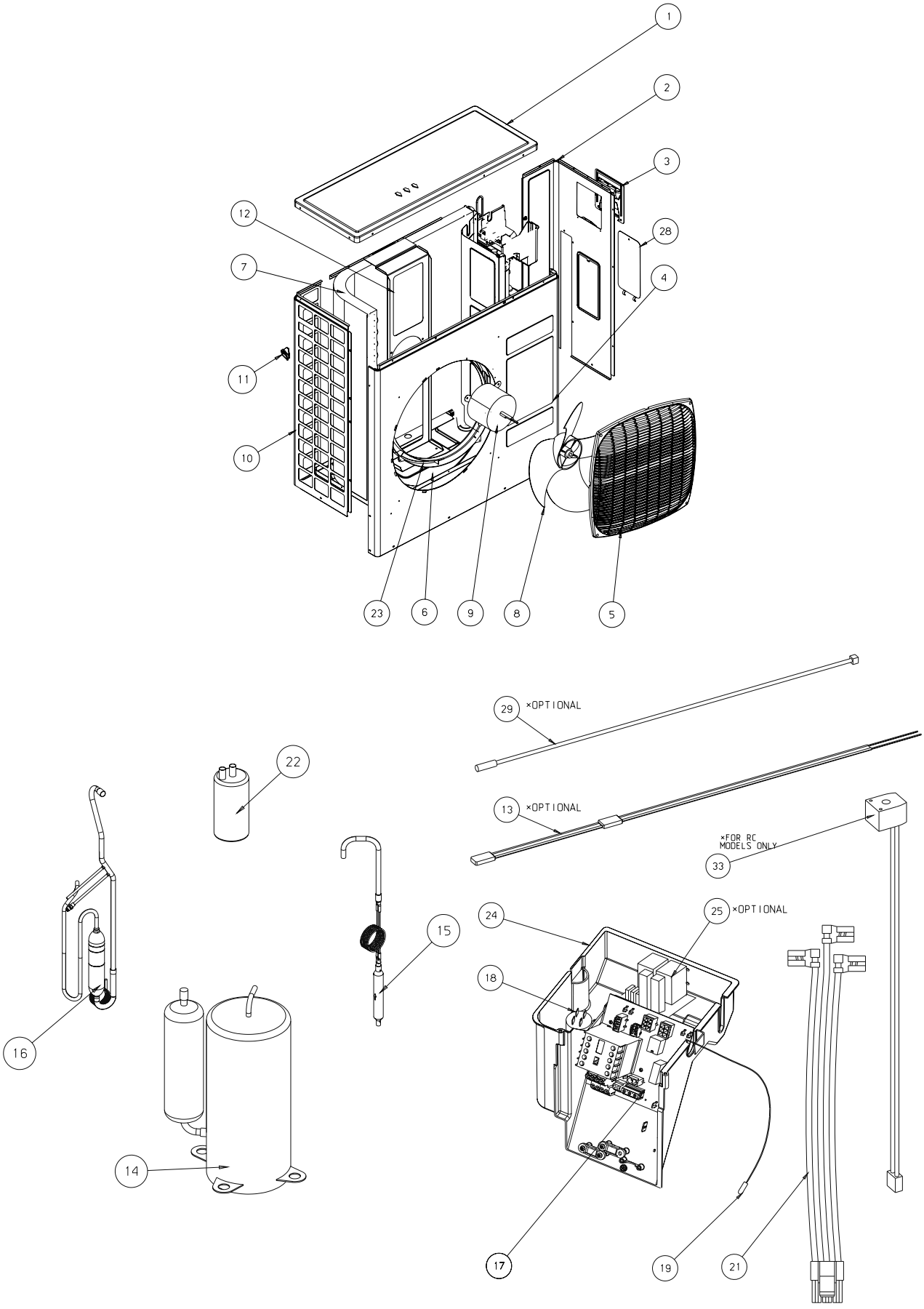
13.37 Outdoor Unit: OOU8-30 RC 3PH



13.38 Outdoor Unit: OU8-30 RC 3PH

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433294	NEW BASE ASSY OU 2005 EXPORT	1	6
433807	COIL OU8-30 GR HDR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433298	COMPRESSOR NN33YCAMT	1	14
433822	CAPILLARY ASSY OU8-30 R410A RC	1	15
433829	TUBING ASSY OU8-30 R410A	1	16
402494	BOARD TPHN 3C	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
437278	COMPRESSOR WIRING OU7/8-3PH	1	21
402284	SUCTION ACCUMULATOR 5" x 3/4"	1	22
439928	OUTLET PLASTIC RING OU8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439795	3PH MOTOR PROTECTOR	1	25
439656	SIDE COVER OU-8/10	1	28
442466	VALVE COIL L700 MOLEX-SANHUA	1	33

13.40 Outdoor Unit: OU8-30 ST 3PH



13.40 Outdoor Unit:OU8-30 ST 3PH

Item Code	Item Description	Quantity	Drawing Number
437045	UPPER COVER EL13 OU LARGE	1	1
402930	SIDE PANEL OU8-33	1	2
436357	SMALL ELECTRICAL COVER OU	1	3
439929	FRONT PANEL/COLLECTOR OU8-30	1	4
437091	OU SQUARE FAN GUARD	1	5
433705	NEW BASE ASSY OU 2005 LOCAL	1	6
433834	COIL OU8-30 ST GR R410A	1	7
4529604	AXIAL FAN D493*143	1	8
434062	MOTOR 86W,2S,OU7-24	1	9
403996	SIDE GUARD OU8-33Z	1	10
436358	OU LEADING HANDLE	1	11
439775	MOTOR SUPPORT OU8	1	12
190443	HEATER CRANKCASE MITSUBISHI	1	13
433298	COMPRESSOR NN33YCAMT	1	14
433830	CAPILLARY ASSY OU8-30 R410A ST	1	15
433833	TUBING ASSY OU8-30 ST R410A	1	16
402494	BOARD TPHN 3C	1	17
442007	CAPACITOR 6mF 400V P1/P2	1	18
434716	THERMISTOR+CAP WTH CONNECTOR	1	19
437278	COMPRESSOR WIRING OU7/8-3PH	1	21
402284	SUCTION ACCUMULATOR 5" x 3/4"	1	22
439928	OUTLET PLASTIC RING OU8	1	23
437229	ELECTRICAL BOX TPHN	1	24
439795	3PH MOTOR PROTECTOR	1	25
439656	SIDE COVER OU-8/10	1	28

14. OPTIONAL ACCESSORIES

14.1 RCW Wall Mounted Remote Control

14.1.1 The RCW wall mounted remote control can be fitted to a large range and models, It can be used as IR (wirless mode) or wired controler.the RCW can control up to15 indoor units using the same settings (on its wired aplication),

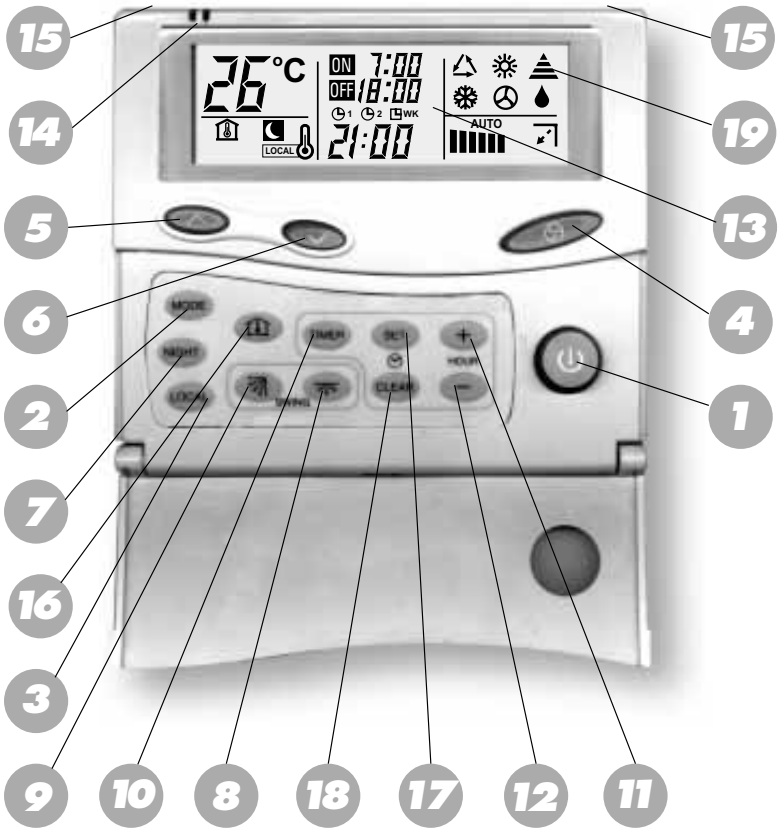
The max wiring length between the controller to the last indoor unit is 300m. for application on WNG LED indoor units an additional interface PCB is needed.

Ordering code no':

RCW – 436195
WNG add' PCB - SP000000290.

REMOTE CONTROL

1. START / STOP button
2. Operation mode selection button COOLING, HEATING, AUTO COOL / HEAT, DRY, FAN.
3. LOCAL temperature sensing button
4. FAN SPEED and AUTO FAN button
5. Room temperature UP button
6. Room temperature DOWN Button
7. NIGHT button
8. Airflow direction MANUAL positioning cor
9. Airflow direction AUTO-CONTROL buttor
10. TIMER button
11. TIMER UP button
12. TIMER DOWN button
13. LCD operation display
14. LOCAL sensor
15. Infrared signal transmitter
16. ROOM temperature button
17. TIMER SET button
18. TIMER CLEAR button
19. Transmission sign



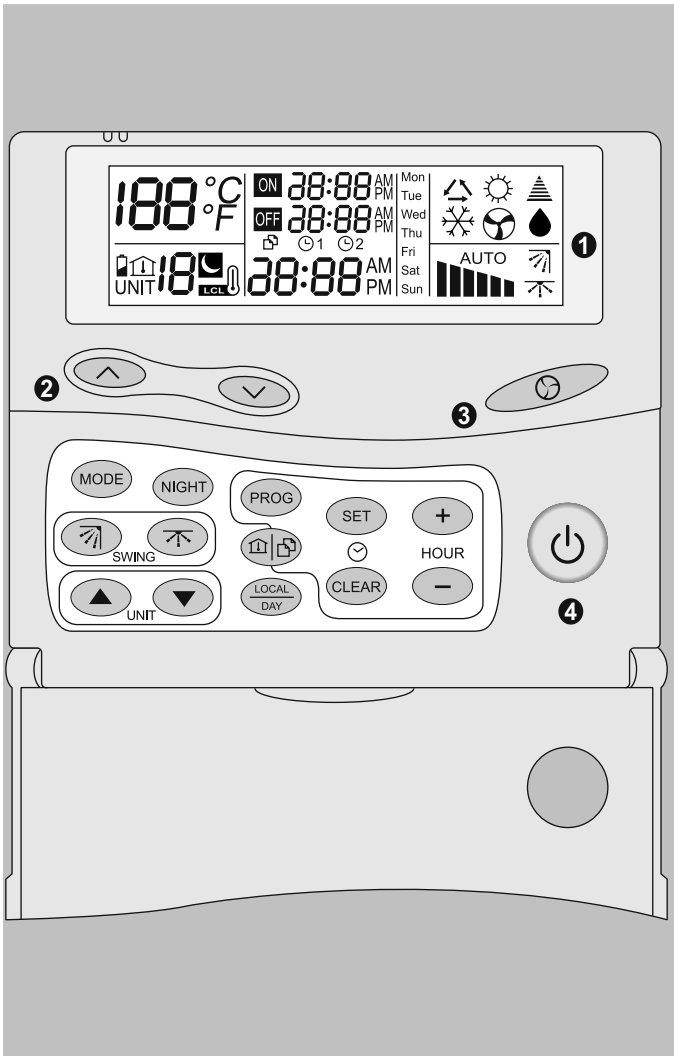
14.2 RCW2 Wall Mounted Remote Cntrol

14.2.1 The RCW2 wall mounted remote controler is a wired controler that can provide affective controling management up to 15 different settings and temp' zones.

The RCW2 can be connected up to a max' of 32 units,allowing a max wiring length of 1000m. for application on WNG LED indoor units an additional interface PCB is needed.

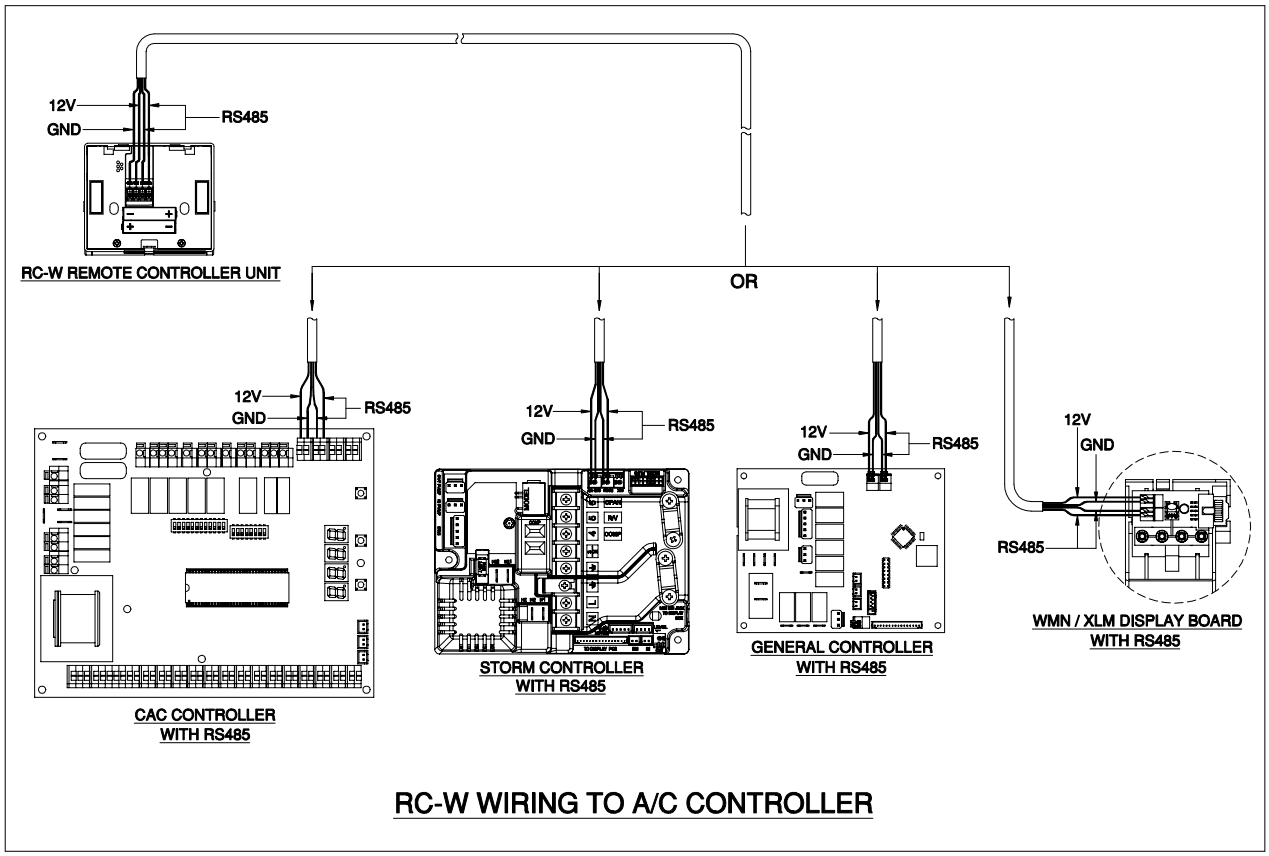
Ordering code no':

RCW2 – SP000000081
WNG add' PCB - SP000000290



❶ Display screen.
❷ Keys for raising and lowering the set temperature.
❸ Ventilation mode selection :
Low speed.
Medium speed.
High speed.
AUTO : Automatic speed selection.
❹ ON / Standby.
SET Accessing the time setting mode.
+ Advancing the time setting.
– Retarding the time setting.
CLEAR Clearing memory of programmed time settings in programming mode.
LOCAL DAY Day of the week selection key or sending "I feel" local temperature setting.
PROG Programming mode key.
"Copy" key, enabling zone parameters to be duplicated for other zones.
MODE Operating mode selection.
NIGHT Day /Night key.
Current zone setting: zone above.
Current zone setting: zone below.
Louver : step by step or horizontal.
Louver : vertical.

14.3 RCW/RCW2 Wiring Connections as Shown on Kit



RC-W WIRING TO A/C CONTROLLER

All Season Kit Installation Instruction

Switch off power supply to the unit

Fig.1

- Remove:
  - Cover **A;**
  - Power panel handle **B;**
  - Side cover **C** (if it exist).

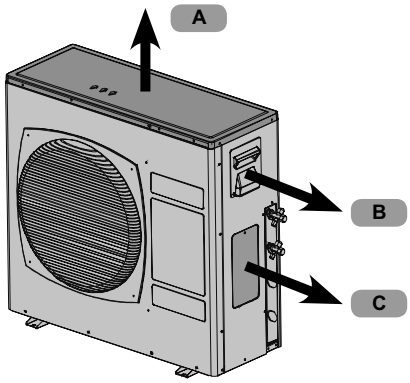


Fig.1

Fig.2

- Mount the Fan speed controller on the partition of the compressor compartment in the holes provided, using four supplied screws .

Note:

- In outdoor models OU8, the Fan Speed Controller should be mounted on the partition toward the outdoor fan motor side.

OU7

OU10

OU8

Fig.2

Fig.3

- Unscrew the cap of the provided service valve **D** and connect to the **T-valve**, supplied in the kit. Use Copper sealing gasked between the flare nut and it's connection to service valve **D**.

Note:

- The **"T-valve"** supplied in the kit is installed between valve **D** and capillary **E** offering the possibility of an additionall pressure connecting output for service.

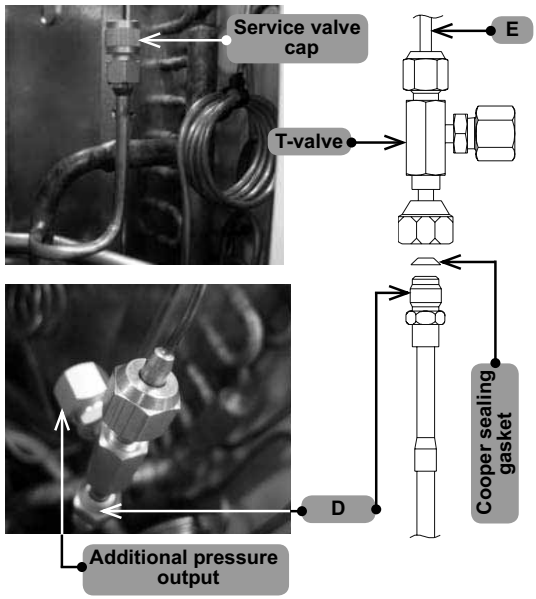


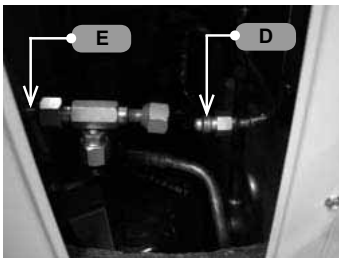
Fig.3

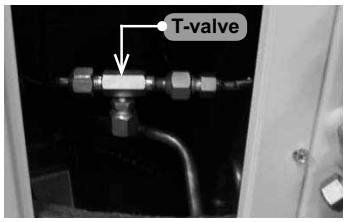
Fig.4

- Connect capillary **E** to **T-valve**.
  Use Copper sealing gasket between the flare nut and the connection to **T-valve.**

Note:

- Installing the Copper sealing gasket is mandatory in order to avoid refrigerant leak.





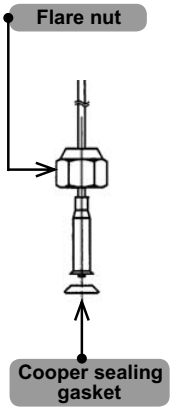
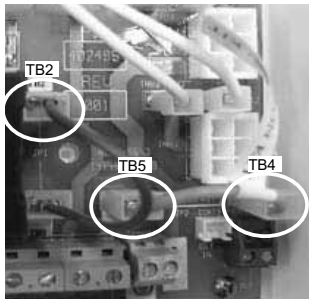


Fig.4

Fig.5

Electrical connections for 1PH units:

- Disconnect the wire from point “6” on main terminal outdoor PCB Typhoon and isolate it with isolation tape.
- Disconnect the JP1 and JP2 wires from tabs TB2; TB4; TB5 on PCB Typhoon.
  Connect the Red Wire from Fan Speed Controller to tab “TB4” on PCB Typhoon.
- Connect Green Wire from Fan Speed Controller to tab “TB2” on PCB Typhoon.
- Connect Y/Green wire from Fan Speed Controller to ground screw on units partition.
- Return “JP1” wire, previously disconnected, to tab “TB2”.



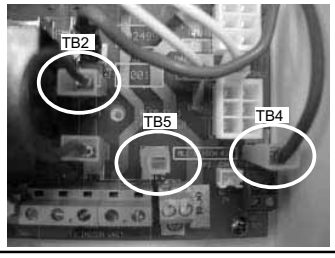
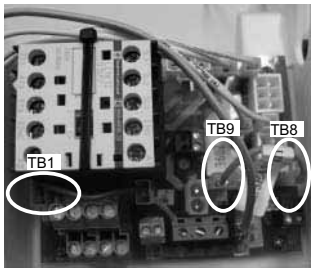


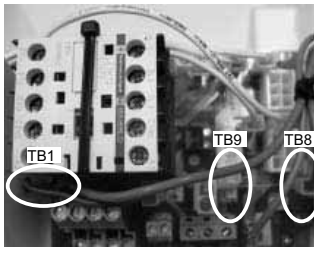
Fig.5

Fig.6

Electrical connections for 3PH units:

- Disconnect the wire from point “6” on main terminal PCB Typhoon and isolate it with isolation tape.
- Disconnect the JP1 and JP2 wires from tabs TB1; TB8; TB9 on PCB Typhoon.
- Connect Red Wire from Fan Speed Controller to tab “TB8” on PCB Typhoon.
- Connect Green Wire from Fan Speed Controller to Tab “TB1” on PCB Typhoon.
- Connect Y/Green wire from Fan Speed Controller to ground screw on units partition.
- Return “JP1” wire, previously disconnected, to





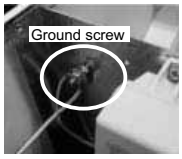
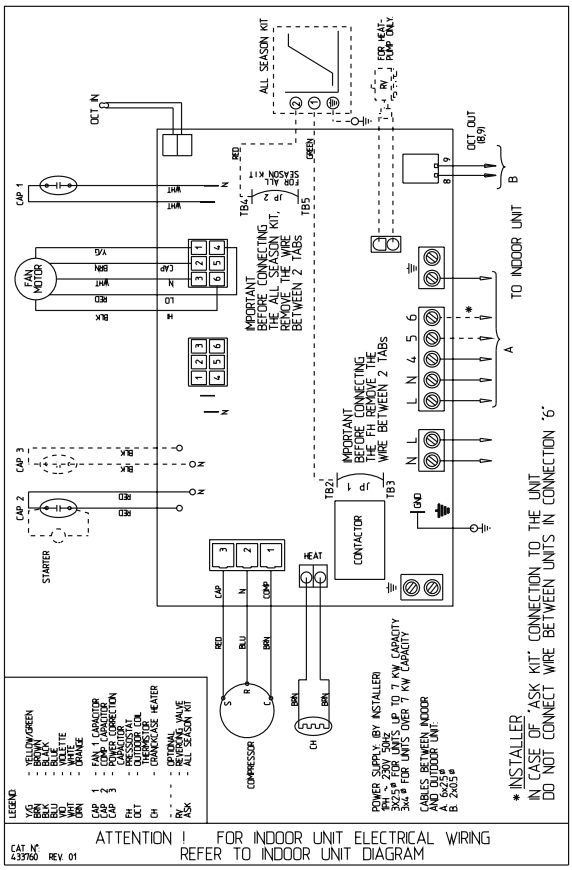


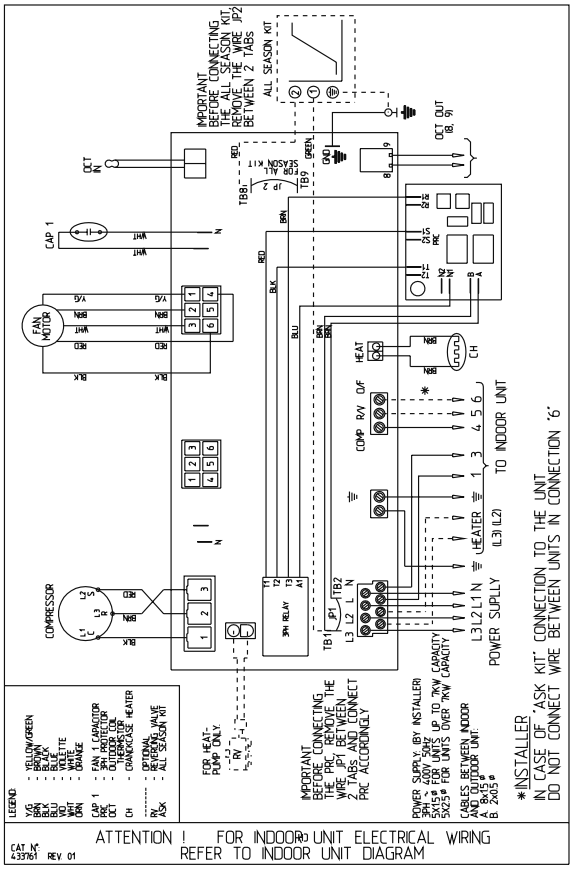
Fig.6

Fig.7

- Verify the wiring to electrical diagram.


ALL SEASON KIT
OCT IN
OCT OUT (B,9)
CAP 1
CAP 2
CAP 3
FAN MOTOR
STARTER
CONTACTOR
HEAT
COMPRESSOR
CH
IMPORTANT BEFORE CONNECTING THE ALL SEASON KIT, REMOVE THE WIRE BETWEEN 2 TABS
IMPORTANT BEFORE CONNECTING THE FH REMOVE THE WIRE BETWEEN 2 TABS
TO INDOOR UNIT
* INSTALLER
IN CASE OF "ASK KIT" CONNECTION TO THE UNIT
DO NOT CONNECT WIRE BETWEEN UNITS IN CONNECTION "6"
ATTENTION ! FOR INDOOR UNIT ELECTRICAL WIRING
REFER TO INDOOR UNIT DIAGRAM
CAT N° 433760 REV. 01

1PH Unit



3PH Unit

Fig.8

- Arrange the wires and capillary tube together with plastic ties, don't fold or break the capillary tube,keep a large loop for extra length of capillary tube.
- Check for refrigerant leaks.

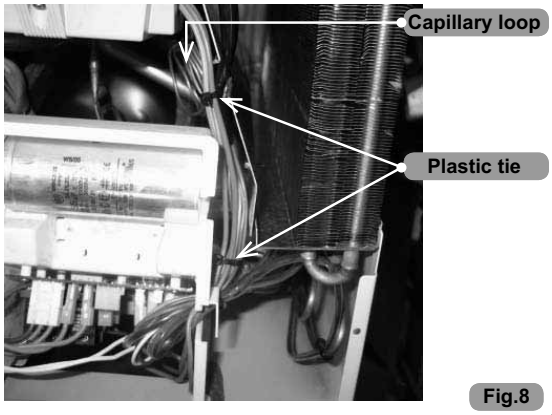


Fig.8

- Re-assemble the previously removed elements.

Installation Instruction for Electrical Heaters (as shown on Kit)

TH 3263 E - 399529

Electric heating for PXD 12 - 15 - 18 - 24 - 28 - 32 SX SP 9 - 12 - 15 - 18- -24 - 30

GB I F E D

KIT DETAILS :

- *1 electric heater with wiring*
- *2 metal supports + screws*
- *2 screws to fix heater*
- *1 foam insulation block*
- *2 foam insulation squares*
- *1 sticky back wiring diagram to place in the side panel above the unit wiring diagram*
- *1 configuration plug (heatpump = 243213)*

MAKE SURE THAT AIR CONDITIONER IS DISCONNECTED FROM THE MAINS

KIT INSTALLATION : (Fig.1)

1 *Open the return air grille by pulling both edges*

2 *Remove the end screws*
Unscrew the middle screw without removing it

3 *Unhook the grille by pulling upwards*

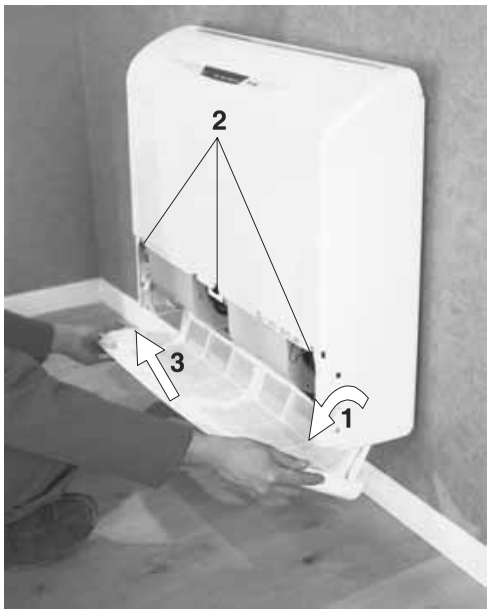
4 *Remove the side panels by pulling down*

5 *Remove the 3 screws holding the unit top*

6 *Unhook the unit top*

*Disconnect the wires between the **PXD** and the top:*
• Display cable (clear insulated cable).
• Vertical louver motor wires (red and blue with connectors).
• Horizontal louver motor wires (black).
Take care to separate the wire to help re-instalation.

Fig.1



KIT INSTALLATION: (Fig.2)

1 *Insert the metal support in the slots (push to break the polystyrene behind the slot)*

2 *Fix the supports with the supplied screws*

3 *Cover the metal supports with the foam squares (to avoid air by-pass)*

4 *Slide the heater assembly into the PXD*

5 *Fix the heater assembly to the supports with the supplied screws*

ELECTRICAL CONNECTIONS

- *Place the wiring in the corner so that the unit top can be replaced*

MODELS PXD 12 - 15 - 18 - 24 - 28 - 32

- *Connect the wires with 6.35 connectors directly to the control board as shown*

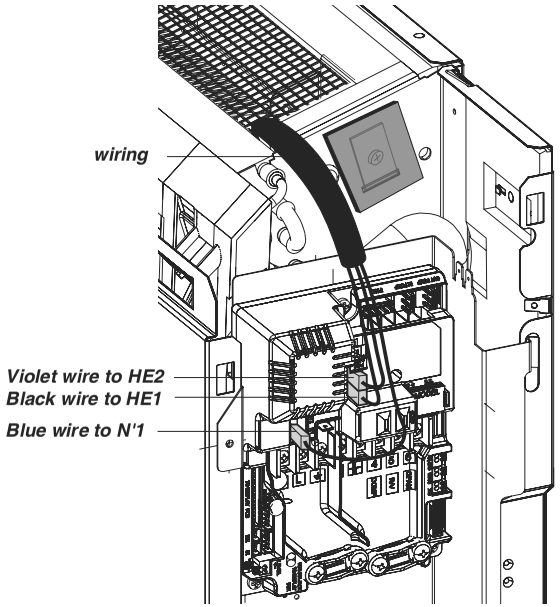
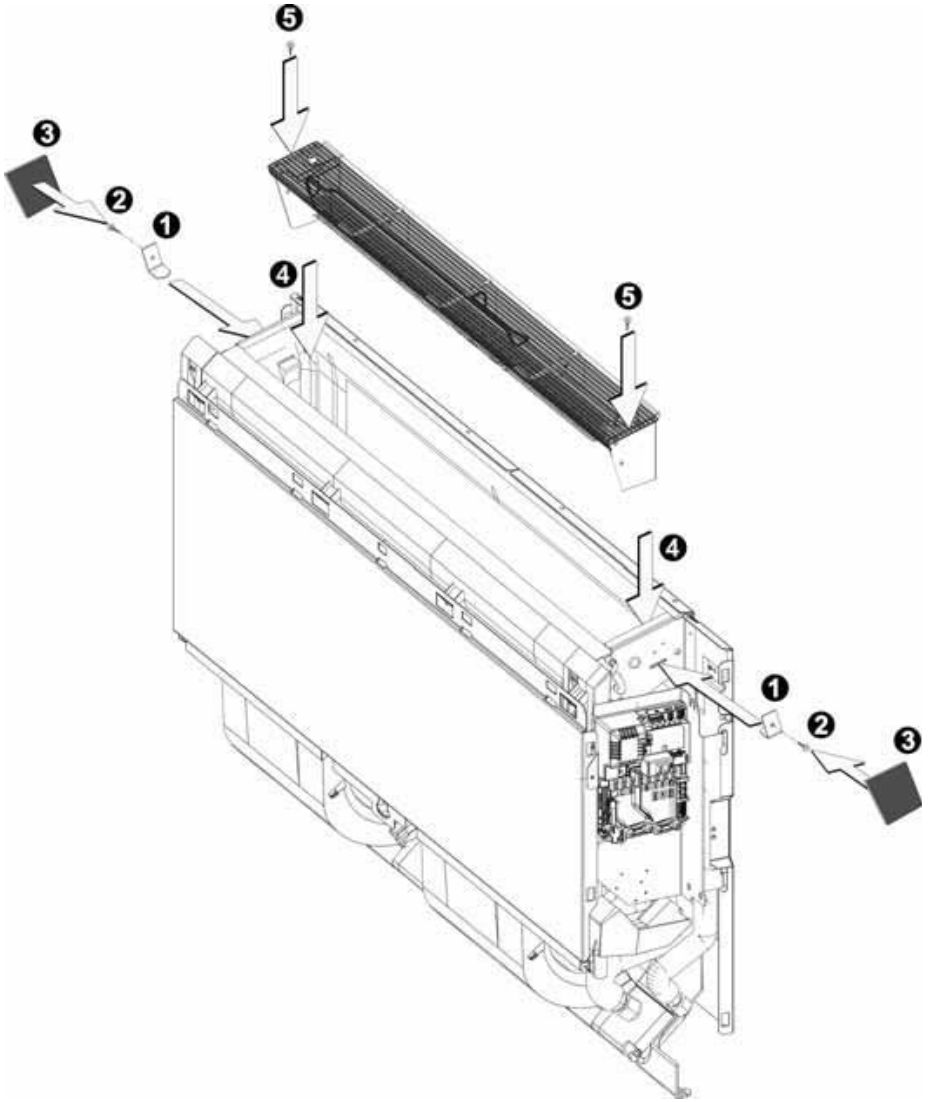
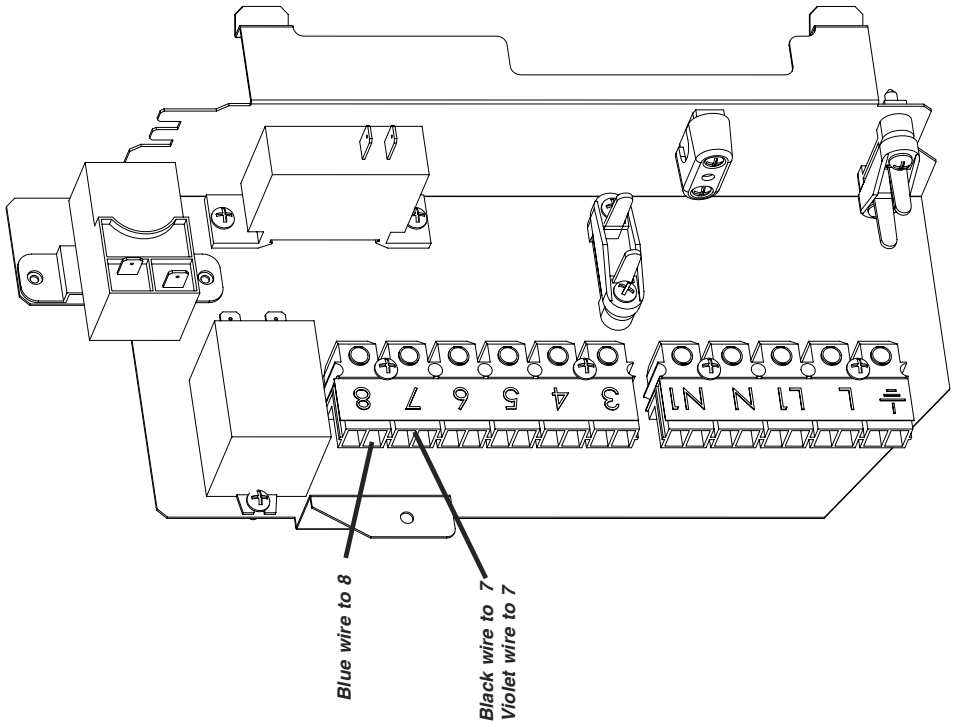


Fig.2



SXSP 9 - 12 - 15 - 18 - 24 - 30



MODELS SXSP 9 - 12 - 15 - 18 - 24 - 30

- Connect the wires with 6.35 connectors directly to the control board as shown

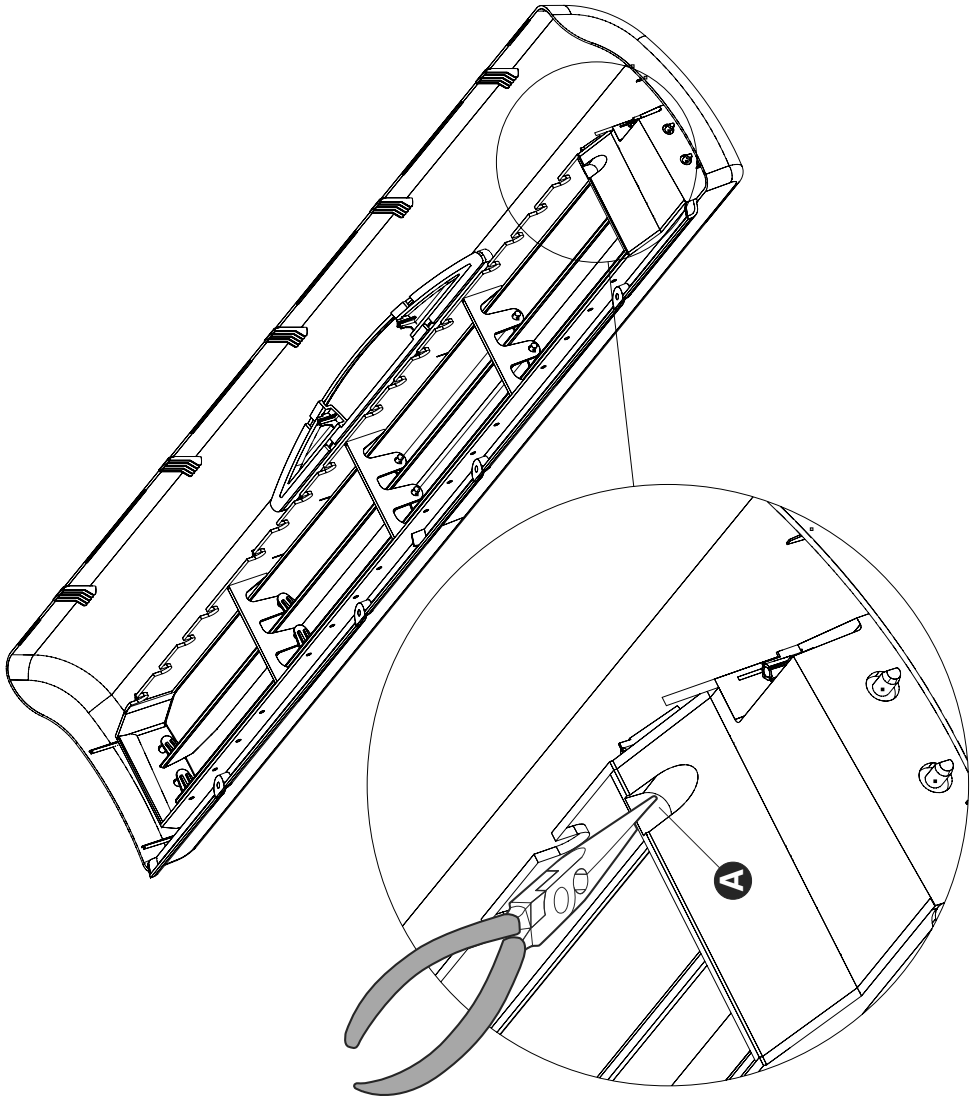
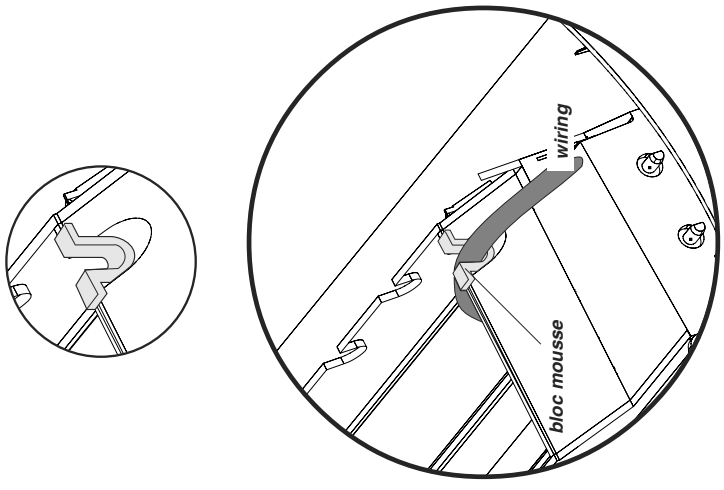


Fig.3

KIT INSTALLATION : (Fig.3)

- *On the unit top :*
  - *Using flat pliers break the plastic A (for the heater cable)*
  - *Place the foam insulation in the groove (to prevent air by-pass)*



KIT INSTALLATION : (Fig.4)
PXD 12 - 15 - 18 - 24 - 28 - 32
- *On the electric board*

- *Your unit is configured as **HEATPUMP** without electric heating*
- *To configure as **HEATPUMP** with electric heating*

- *Remove the plug marked **PXD-RC** (heapump) and replace it with the plug marked **PXD-SH** (heatpump with supplementary heaters) (fixed on the control board)*

*Heatpump **without** heaters*	***243211***	***PXD-RC***
*Heatpump **with** heaters*	***243213***	***PXD-SH***

REASSEMBLY
- *Reconnect the wiring between the PXD and the unit top*
- *Re install the unit top on the unit taking care to pass the wires in the groove as shown below*
- *Stick the wiring diagram in the side panel above the existing wiring diagram*
- *Replace the unit top screws then the sides and return air grille*

CAUTION

THE DISCHARGE PORT OF THE APPLIANCE MUST NEVER BE COVERED OR OBSTRUCTED BY A CURTAIN, CLOTH, ETC...

- *A label "DO NOT COVER" is supplied with the kit. Place it on the rear of the discharge frame as shown below.*

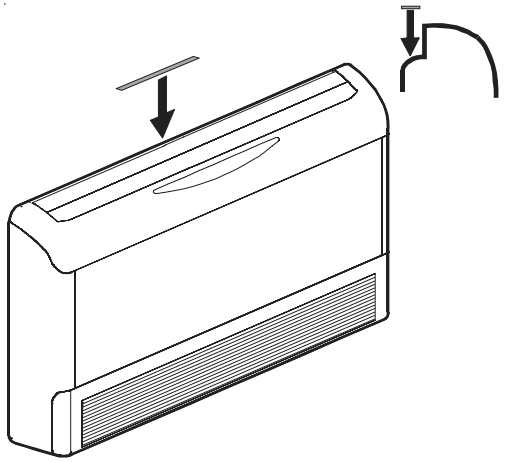
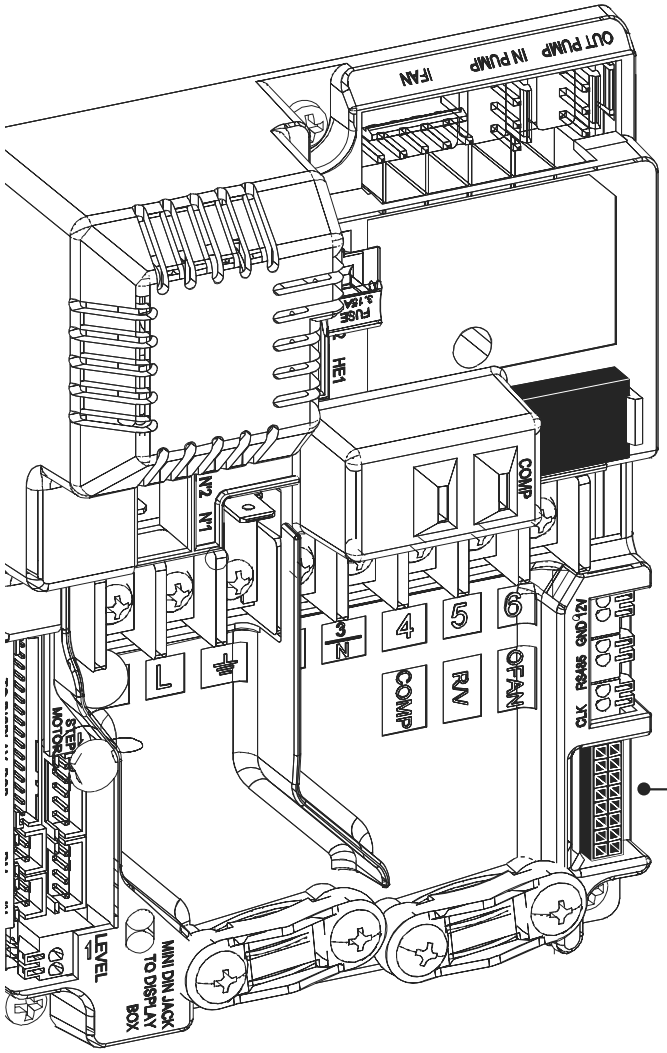


Fig.4

PXD 12 - 15 - 18 - 24 - 28 - 32



WARNING:
The plug has a small arrow to indicate the correct orientation. The side with the arrow must be towards the back of the unit.

Towards the metal panel

APPENDIX A

INSTALLATION AND OPERATION MANUAL

ELECTRA

I F E Py GB D

Gamma Comfort - Gama confort - Comfort Range - *Gamme Confort* - ***у добство У становки*** - *Komfort Klim ageräte*

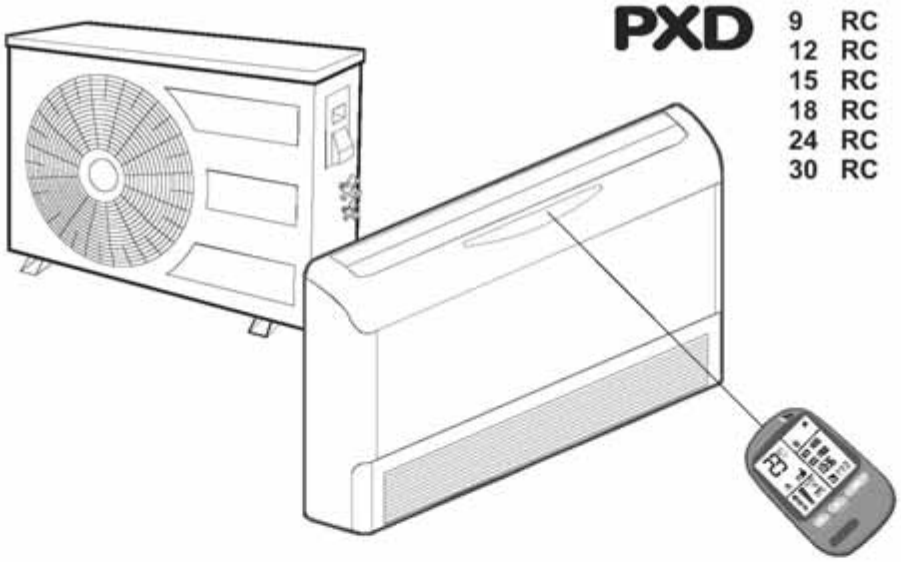
Split system da parete / da soffitto
Split system mural / de techo
Split system for Wall / ceiling mounting

Split system Allège / Plafonnier
Разделвная Система монтр уюшяся на стене/потолке
Split-Bauweise vertikale / horizontale Montage

Fredde soltanto
Sólo frío
Cooling only

Pompadi calore
Bomba de calor
heatpump

R410A



PXD

9 RC
12 RC
15 RC
18 RC
24 RC
30 RC

Prima di installare l'apparecchio, leggere attentamente le presenti istruzioni. Conservatele per farvi riferimento ulteriormente.
Lea atentamente estas instrucciones antes de iniciar la instalación y consérvelas para remitirse a ellas posteriormente.
Read this instruction sheet carefully before installing, retain it safely for future reference.

Lire attentivement ces instructions avant de commencer l'installation et conservez-les pour vous y référer ultérieurement.
Прежде чем приступаЪ k установке кондиционера, прочтите внимателвно данное руководство для далвнеишихсправок.
Bitte lesen sie diese anweisungen vor der installation sorgfältig durch und bewahren sie sie zur weiteren verwendung auf.

ISTRUZIONI DI INSTALLAZIONE TH 3261 D - 468050051 / INSTRUCCIONES DE INSTALLACION / INSTALLATION INSTRUCTION
NOTICE D'INSTALLATION / инструкция По ус ТАНОВКЕ / INSTALLATIONSHANDBUCH

CONTENT

MESSA FUORI TENSIONE PRIMA DI QUALSIASI INTERVENTO SULLE SCATOLE ELETTRICHE

PUESTA FUERA DE TENSIÓN OBLIGATORIA ANTES DE CUALQUIER INTERVENCIÓN EN LAS CAJAS ELÉCTRICAS

IT IS MANDATYORY TO CUT OFF POWER SUPPLY BEFORE STARTING TO WORK IN THE ELECTRIC CASING BOXES.

RACCOMANDAZIONI GENERALI

- Congratulazioni per avere scelto un condizionatore d'aria ELECTRA.

CONSIGLI DI SICUREZZA

- In caso di intervento sul materiale, seguire le regole di sicurezza in vigore.
- L'installazione e la manutenzione del materiale dovranno essere eseguite da personale qualificato.
- Assicurarsi che l'alimentazione elettrica disponibile e la frequenza della rete siano adeguate alla corrente di funzionamento necessaria tenuto conto delle condizioni specifiche della zona di installazione e della corrente necessaria a tutti gli altri apparecchi collegati al circuito.

AVVERTENZA

- Prima di eseguire qualsiasi intervento o operazione di manutenzione, mettere fuori tensione l'apparecchio.
- Il fabbricante declina qualsiasi responsabilità in caso di mancato rispetto delle presenti istruzioni. Inoltre, in questo caso la garanzia cesserà di essere valida.
- In caso di difficoltà, si prega di contattare il Servizio Tecnico di zona.
- Prima dell'installazione del materiale, procedere, se possibile al montaggio degli accessori obbligatori o meno (vedi manuale fornito con ogni accessorio).
- Per una migliore conoscenza del prodotto, vi consigliano di consultare anche il nostro manuale tecnico.
- Le informazioni contenute nelle presenti istruzioni sono soggette a modifiche senza preavviso.

RECOMENDACIONES GENERALES

- Ante todo, deseamos darle las gracias por haber elegido un equipo ELECTRA.

CONSEJOS DE SEGURIDAD

- Cuando intervenga en su equipo, siga las reglas de seguridad en vigor.
- La instalación y el mantenimiento deberán ser efectuados exclusivamente por personal cualificado.
- Cerciórese de que la alimentación eléctrica disponible y la frecuencia de la red están adaptadas a la corriente de funcionamiento necesaria, teniendo en cuenta las condiciones específicas del emplazamiento y la corriente necesaria para cualquier otro aparato conectado al mismo circuito.

ADVERTENCIA

- Cortar la alimentación eléctrica general antes de cualquier intervención u operación de mantenimiento.
- El fabricante declina toda responsabilidad y la garantía dejará de ser válida si no se respetan estas instrucciones de instalación.
- En caso de problemas, recurra al Servicio Técnico de su zona.
- Antes de la instalación, si fuera posible, monte los accesorios, obligatorios o no (ver las instrucciones entregadas con cada uno de ellos).
- Para conocer mejor el producto, le recomendamos que consulte también nuestras instrucciones técnicas.
- Las informaciones de este manual están sujetas a modificaciones sin previo aviso.

GENERAL RECOMMENDATIONS

- *Congratulations for having selected an ELECTRA air conditioner.*

SAFETY DIRECTIONS

- *Follow the safety rules in force when you are working on your appliance.*
- *Installation and maintenance of the equipment must only be performed by qualified specialists in accordance with the rules of good workmanship and prevailing standards and instructions.*
- *Make sure that the power supply and its frequency are adapted to the required electric current of operation, taking into account specific conditions of the location and the current required for any other appliance connected with the same circuit.*

WARNING

- *Cutoff power supply before starting to work on the appliance.*
- *The manufacturer declines any responsibility and the warranty becomes void if these instructions are not respected.*
- *If you meet a problem, please call the Technical Department of your area.*
- *If possible, assemble the mandatory or optional accessories before placing the appliance on its final location.(see instructions provided with each accessory)*
- *In order to become fully familiar with the appliance, we suggest to read also our Technical Instructions .*
- *The information contained in these Instructions are subject to modification without advance notice.*

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COMPOSIZIONE DEL COLLO

1 PXD.
1 supporto da parete (fornito montato sull'apparecchio)
1 sacchetto viteria
1 sacchetto documentazione
1 telecomando ad infrarossi + supporto
1 sagoma di posizionamento per i tubi di collegamento + collari di fissaggio dei tubi di collegamento
1 sagoma di montaggio (interasse di fissaggio)
1 cavo di collegamento sonda
1 filtro e relativo supporto.

COMPOSICIÓN DEL PAQUETE

1 PXD.
1 soporte mural (entregado montado en el aparato).
1 bolsa de tornillería.
1 bolsa de documentación.
1 mando a distancia IR + soporte.
1 plantilla de posicionamiento de los tubos de conexión
+ abrazaderas de fijación de los tubos de conexión.
1 plantilla de montaje (distancia entre ejes de fijación).
1 cable de conexión sonda.
1 filtro y su soporte.

CONTENTS OF PARCEL

1 PXD.
1 wall support. (supplied fitted to the unit).
1 bag containing hardware.
1 bag containing documentation.
1 IR remote control + support.
1 template for positioning connection tubing. + connection tubing fixing clamps
1 assembly template (distance between mounting holes)
1 sensor connecting cable
1 active charcoal filter and its support

CONTENT

I

STRUMENTI PER L'INSTALLAZIONE E LA MANUTENZIONE

ATTENZIONE

Installazione del condizionatore con il nuovo refrigerante

• IL PRESENTE CONDIZIONATORE D'ARIA UTILIZZA IL NUOVO REFRIGERANTE HFC (R410A) PER LA PROTEZIONE DELLO STRATO DI OZONO.
Il refrigerante R410A è facilmente soggetto ad alterazioni ad opera di impurità quali acqua, membrane ossidanti e oil, poiché la sua pressione di esercizio è di circa 1,6 volte superiore a quella del refrigerante R22. In seguito all'adozione del nuovo refrigerante, è stato modificato anche l'olio refrigerante per macchine. Durante l'installazione è pertanto consigliabile verificare che acqua, polvere, il refrigerante utilizzato in precedenza o Folio refrigerante per macchine non entrino nel circuito di refrigerazione del condizionatore con il nuovo refrigerante R410A.
Per evitare di mischiare il refrigerante con l'olio refrigerante, le dimensioni delle sezioni di collegamento della porta di caricamento dell'unità principale o degli strumenti di installazione sono diverse da quelle delle unità con refrigeranti convenzionali. Di conseguenza, per le unità con il nuovo refrigerante (R410A) sono necessari degli strumenti appositi, Per il collegamento dei tubi, utilizzare tubi nuovi e puliti con raccordi ad alta resistenza alla pressione, realizzati appositamente per il refrigerante R410A, onde evitare l'entrata di acqua e/o polvere. In particolare si consiglia di non utilizzare le tubazioni già. esistenti, poiché possono contenere impurità e presentano dei problemi relativamente ai raccordi a pressione.

Modifiche del prodotto e dei componenti
Nei condizionatori che utilizzano il refrigerante R410A, onde evitare di caricare accidentalmente un refrigerante diverso, è stato modificato il diametro della porta di servizio della valvola di controllo dell'unità esterna (valvole a 3 vie). (1/2 UNF 20 filetti per pollice)
• Per aumentare la resistenza alla pressione della tubazione refrigerante, sono stati modificati il diametro della svasatura sul lato di lavorazione e le misure dei codoli svasati sul lato opposto. (per tubi in rame con dimensioni nominali di 1/2 e 5/8)

Nuovi strumenti per R410A

Nuovi strumenti per R410A	Applicabile al modello R22		Modifiche
Manometro collettore	X		Poiché la pressione di esercizio è elevata, non è possibile misurarla con manometri convenzionali. Per evitare l'introduzione di un refrigerante diverso, sono stati modificati i diametri della porte.
Tubo di caricamento	X		Per aumentare la resistenza alla pressione, sono stati modificati i materiali del tubo e le misure delle porte (a 1/2 UNF 20 filetti per pollice). All'acquisto di un tubo di caricamento, assicurarsi di controllare le misure delle porte.
Bilancia elettronica per il caricamento del refrigerante	O		L'elevata pressione e la rapidita di gassificazione provocano la formazione di bolle, che rendono difficile la lettura del valore indicato mediante un cilindro di caricamento.
Chiave torsiometrica (diametro nominale 1/2, 5/8)	X		È stata aumentata la misura dei codoli svasati opposti. Per diametri nominali di 1/4 e 3/8 viene utilizzata una chiave normale.
Strumento per svasatura (di tipo a innesto)	O		Aumentando la misura del foro di alloggiamento della barra di bloccaggio, è stata migliorata la forza della molla dello strumento.
Calibro di regolazione della sporgenza	–		Da utilizzare quando la svasatura viene eseguita con uno strumento di svasatura convenzionale.
Adattatore della pompa a vuoto	O		Da collegare a una pompa a vuoto convenzionale. L'uso dell'adattatore è necessario per impedire il ritorno dell'olio della pompa a vuoto nel tubo di caricamento. Il raccordo di collegamento del tubo di caricamento e provvisto di due porte, una per il refrigerante convenzionale (7/16 UNF 20 filetti per pollice) e una per l'R410A. Se Folio (minerale) della pompa a vuoto si mescola con l'R410A, si può creare un deposito di morchia che potrebbe danneggiare l'apparecchiatura.
Rilevatore di perdite di gas	X	-	Solo per refrigerante HFC.

• Il "cilindro refrigerante" viene fornito con la designazione del refrigerante (R410A) e il rivestimento di protezione di colore rosa, secondo quanto specificato dall'ARI (Air Conditioning and Refrigeration Institute, Ente americano per la climatizzazione e refrigerazione) (codice colore ARI: PMS 507).
• La"porta di caricamento e le tenute del cilindro refrigerante" richiedono inoltre attacchi da 1/2 UNF 20 filetti per pollice, corrispondenti alle dimensioni della porta del tubo di caricamento.

E

HERRAMIENTAS DE INSTALACIÓN/MANTENIMIENTO (SÓLO PARA PRODUCTO R410A)

PRECAUCIÓN

Instalación del acondicionador de aire con un refrigerante nuevo

● ESTE ACONDICIONADOR DE AIRE UTILIZA EL NUEVO REFRIGERANTE HFC (R410A) QUE NO DESTRUYE LA CAPA DE OZONO.
El refrigerante R410A puede contaminarse con impurezas, tales como agua, membrana oxidante y aceites, porque la presi n de trabajo del refrigerante R410A es aproximadamente 1,6 veces superior a la del refrigerante R22. Junto con la adopci n del nuevo refrigerante, también ha sido cambiado el aceite del aparato de refrigeraci n. Por lo tanto, durante los trabajos de instalaci n, asegúrese de que no entre agua, polvo, refrigerante del anterior ni aceite del aparato de refrigeraci n en el circuito del acondicionador de aire del nuevo tipo de refrigerante R410A.
Para impedir que pueda mezclarse el refrigerante o el aceite del aparato de refrigeraci n, los tamaños de las secciones de conexi n del orificio de carga de la unidad principal y las herramientas de instalaci n son diferentes a los utilizados en las unidades de refrigeraci n convencionales. Por consiguiente, para el nuevo refrigerante (R410A) se requiere el uso de herramientas especiales, Para los tubos de conexi n, utilice materiales de fontanería nuevos y limpios, con uniones de alta presi n fabricados exclusivamente para R410A, para que no entre agua ni polvo. Adem s, no utilice las tuberías existentes porque habr algunos problemas con las uniones a presi n y posibles impurezas en elias.

Cambios en el producto y componentes
En los acondicionadores de aire que utilizan R410A, para impedir cargar accidentalmente cualquier otro tipo de refrigerante, se ha cambiado el tamaño del di metro del orificio de mantenimiento de la v lvula de control de la unidad exterior (v lvula de 3 direcciones). (rosca 1/2 UNF de 20 filetes por pulgada)
● Con objeto de aumentar la fuerza de resistencia a la presi n de la tubería de refrigerante, se ha cambiado el di metro del abocinamiento y tamaños de las tuercas de abocinamiento opuesto. (para tubos de cobre con dimensiones nominales de 1/2 y 5/8)

Herramientas nuevas para R410A

Herramientas nuevas para R410A	Aplicable al modelo R22		Cambios
Distribuidor de man metro	×		Como la presi n de trabajo es alta, resulta imposible medirla utilizando medidores convencionales. Con objeto de impedir que se pueda cargar cualquier otro refrigerante, se han cambiado los di metros de los orificios.
Manguera de carga	×		Con objeto de aumentar la fuerza de resistencia a la presi n, se han cambiado los materiales de las mangueras y tamaños de los orificios (a rosca 1/2 UNF de 20 filetes por pulgada). Cuando vaya a comprar una manguera de descarga, asegúrese de confirmar el tamaño del orificio.
Equilibrio electr nico para cargar el refrigerante	○		Como la presi n de trabajo es alta y la velocidad de gasificaci n r pida, resulta difícil leer el valor indicado por medio de cilindro de carga, porque se producen burbujas.
Llave dinamométrica (di m. nominal 1/2, 5/8)	×		Se ha aumentado el tamaño de las tuercas de abocinamiento opuesto. Así mismo, se utiliza una llave común para los di metros nominales de 1/4 y 3/8.
Herramienta de abocinamiento (tipo embrague)	○		Aumentando el tamaño del orificio de recepci n de la barra de sujeci n, se ha mejorado la fuerza de resorte de la herramienta.
Medidor para ajuste de proyecci n	−		Se utiliza cuando se hace abocinamiento utilizando una herramienta de abocinamiento convencional.
Adaptador de bomba de vacío	○		Se conecta a una bomba de vacío convencional. Es necesario utilizar un adaptador para evitar que el aceite de la bomba de vacío fluya hacia atr s y entre en la manguera de carga. La parte de conexi n de la manguera de carga tiene dos orificios – uno para refrigerante convencional (rosca 7/16 UNF de 20 filetes por pulgada) y otro para R410A. Si el aceite (mineral) de la bomba de vacío se mezcla con el R410A podr n crearse residuos y dañar el equipo.
Detector de fugas de gas	×		Exclusivo para refrigerante HFC.

● Así mismo, el "cilindro de refrigerante" viene con la designaci n de refrigerante (R410A) y el revestimiento protector de color rosa ARI especificado para EE.UU. (c digo de color ARI: PMS 507).
● Adem s, el "orificio de carga y la junta para el cilindro de refrigerante" requieren una rosca 1/2 UNF de 20 filetes por pulgada correspondiente al tamaño del orificio de la manguera de carga.

CONTENT

GB

INSTALLATION/SERVICE TOOLS (ONLY FOR R410A PRODUCT)

CAUTION

New Refrigerant Air Conditioner Installation

THIS AIR CONDITIONER ADOPTS THE NEW HFC REFRIGERANT (R410A) WHICH DOES NOT DESTROY OZONE LAYER. R410A refrigerant is apt to be affected by impurities such as water, oxidizing membrane, and oils because the working pressure of R410A refrigerant is approx. 1.6 times of refrigerant R22. Accompanied with the adoption of the new refrigerant, the refrigeration machine oil has also been changed. Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigeration machine oil does not enter into the new type refrigerant R410A air conditioner circuit.

To prevent mixing of refrigerant or refrigerating machine oil, the sizes of connecting sections of charging port on main unit and installation tools are different from those used for the conventional refrigerant units. Accordingly, special tools are required for the new refrigerant (R410A) units. For connecting pipes, use new and clean piping materials with high pressure fittings made for R410A only, so that water and/or dust does not enter. Moreover, do not use the existing piping because there are some problems with pressure fittings and possible impurities in existing piping.

Changes in the product and components

In air conditioners using R410A, in order to prevent any other refrigerant from being accidentally charged, the service port diameter size of the outdoor unit control valve (3 way valve) has been changed. (1/2 UNF 20 threads per inch)

- In order to increase the pressure resisting strength of the refrigerant piping, flare processing diameter and opposing flare nuts sizes have been changed. (for copper pipes with nominal dimensions 1/2 and 5/8)

New tools for R410A

New tools for R410A	Applicable to R22 model		Changes
Gauge manifold	X		As the working pressure is high, it is impossible to measure the working pressure using conventional gauges. In order to prevent any other refrigerant from being charged, the port diameters have been changed.
Charge hose	X		In order to increase pressure resisting strength, hose materials and port sizes have been changed (to 1/2 UNF 20 threads per inch). When purchasing a charge hose, be sure to confirm the port size.
Electronic balance for refrigerant charging	O		As working pressure is high and gasification speed is fast, it is difficult to read the indicated value by means of charging cylinder, as air bubbles occur.
Torque wrench (nominal dia. 1/2, 5/8)	X		The size of opposing flare nuts have been increased. Incidentally, a common wrench is used for nominal diameters 1/4 and 3/8.
Flare tool (clutch type)	O		By increasing the clamp bar's receiving hole size, strength of spring in the tool has been improved.
Gauge for projection adjustment	–		Used when flare is made by using conventional flare tool.
Vacuum pump adapter	O		Connected to conventional vacuum pump. It is necessary to use an adapter to prevent vacuum pump oil from flowing back into the charge hose. The charge hose connecting part has two ports – one for conventional refrigerant (7/16 UNF 20 threads per inch) and one for R410A. If the vacuum pump oil (mineral) mixes with R410A a sludge may occur and damage the equipment.
Gas leakage detector	X	-	Exclusive for HFC refrigerant.

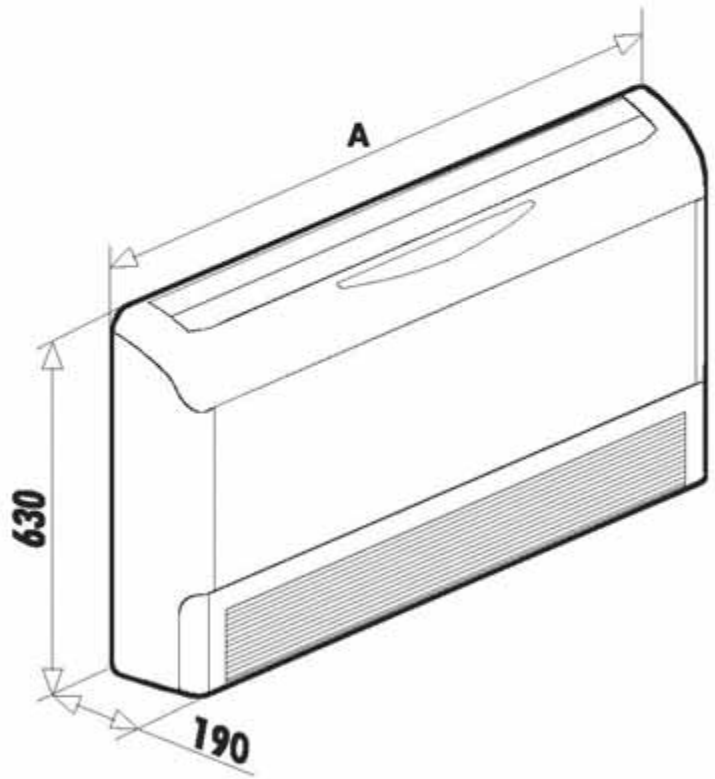
- Incidentally, the "refrigerant cylinder" comes with the refrigerant designation (R410A) and protector coating in the U.S's ARt specified rose color (ARI color code: PMS 507).
- Also, the "charge port and packing for refrigerant cylinder" requires 1/2 UNF 20 threads per inch corresponding to the charge hose's port size.

DIMENSIONI DELL'UNITÀ INTERNA **DIMENSIONES DE LA UNIDAD INTERIOR** ***DIMENSIONS OF INDOOR UNIT***

R410A

		PXD 9	PXD 12	PXD 15	PXD 18	PXD 24	PXD 30
PXD	~230V	ESP012137	ESP012138	ESP012139	ESP012140	ESP012141	
	~400V						

MODELLO 9-12-15 A=820mm MODELLO 18-24-30 A=1200mm	MODELOS 9-12-15 A=820mm MODELOS 18-24-30 A=1200mm	*MODEL 9-12-15* *A=820mm* *MODEL 18-24-30* *A=1200mm*

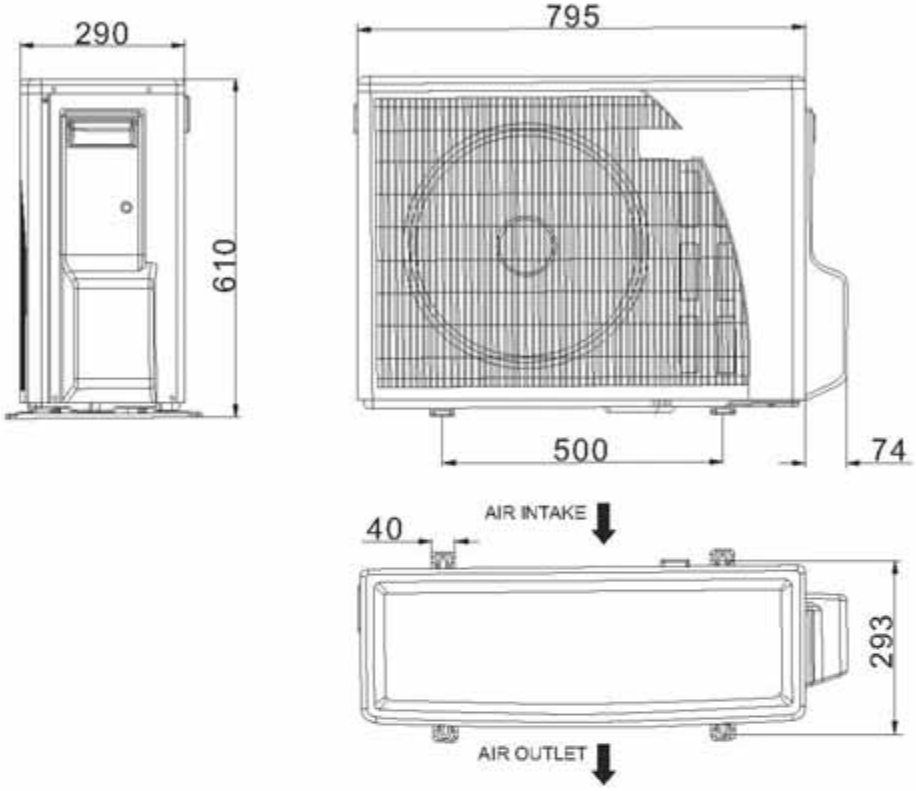


CONTENT

DIMENSIONI DELL'UNITÀ ESTERNE

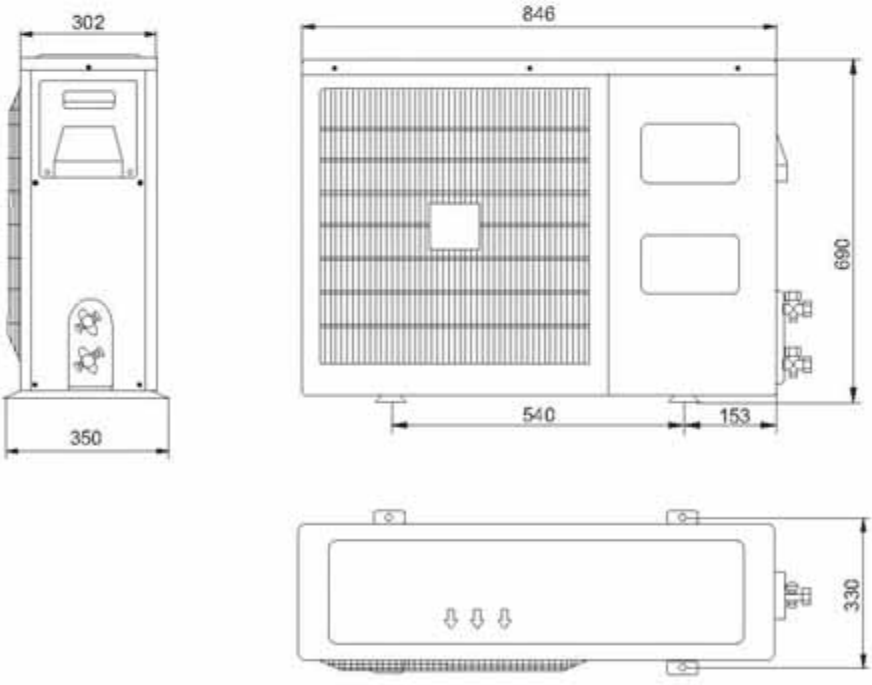
DIMENSIONES DE LAS UNIDADES EXTERIORES

DIMENSIONS OF OUTDOOR UNITS



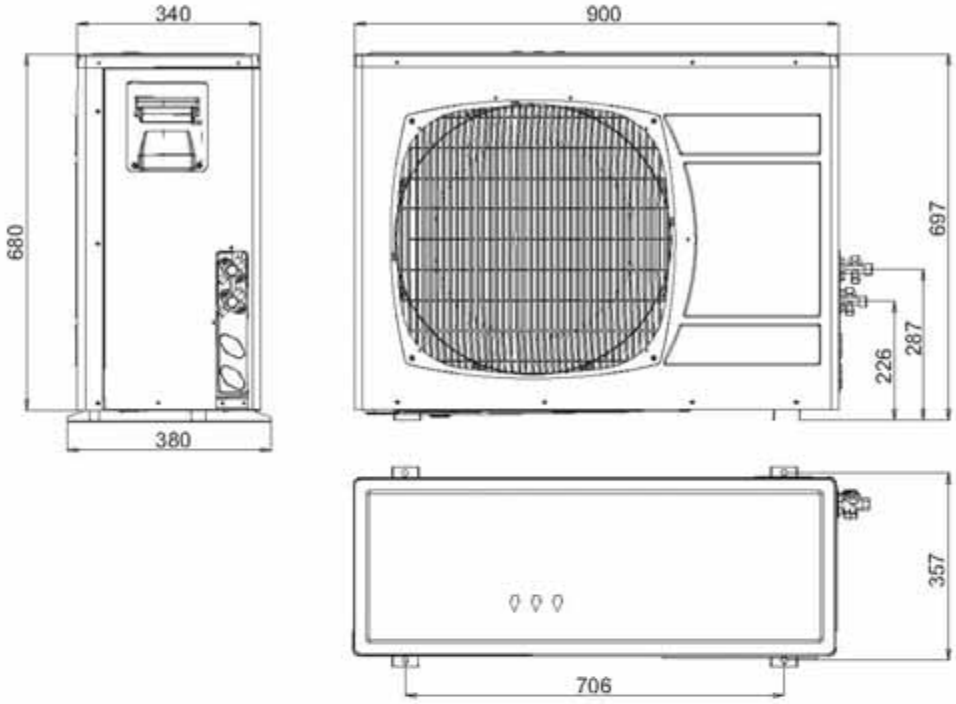
R410A

MODELLO 9-12-15
MODELOS 9-12-15
MODEL 9-12-15



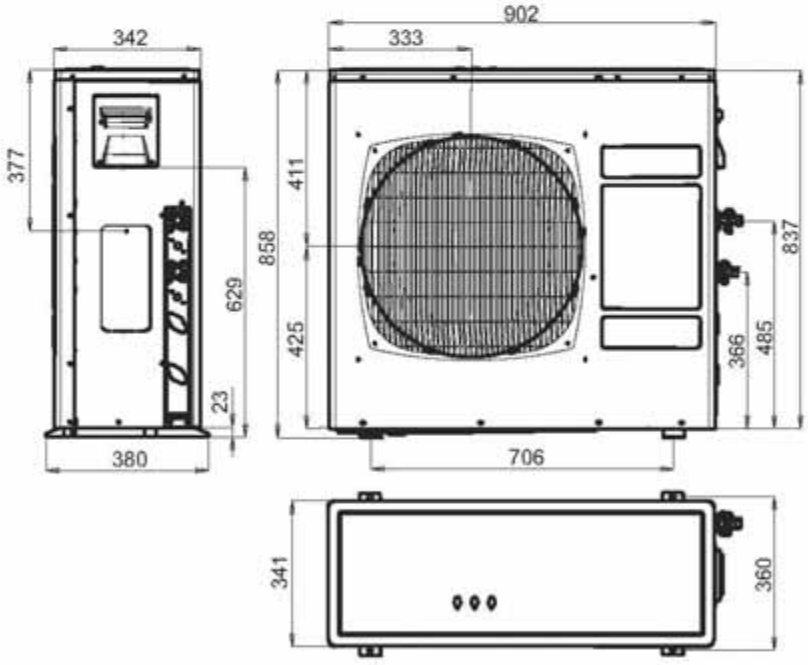
R410A

MODELLO 18
MODELOS 18
MODEL 18



R410A

MODELLO 24
MODELOS 24
MODEL 24



R410A

MODELLO 30
MODELOS 30
MODEL 30

CONTENT

INSTALLAZIONE DELL'UNITÀ INTERNA PXD

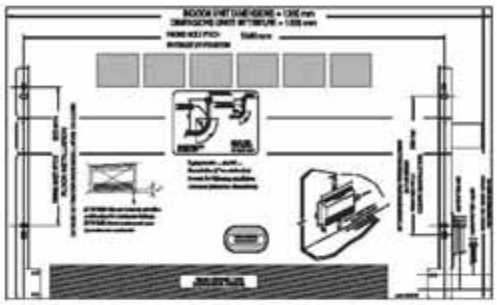
- Installare il sostegno da parete del PXD per mezzo della sagoma di montaggio fornito con l'apparecchio.
- Gli spazi liberi dell'apparecchio vengono indicati su questa sagoma.

INSTALACIÓN DE LA UNIDAD INTERIOR PXD

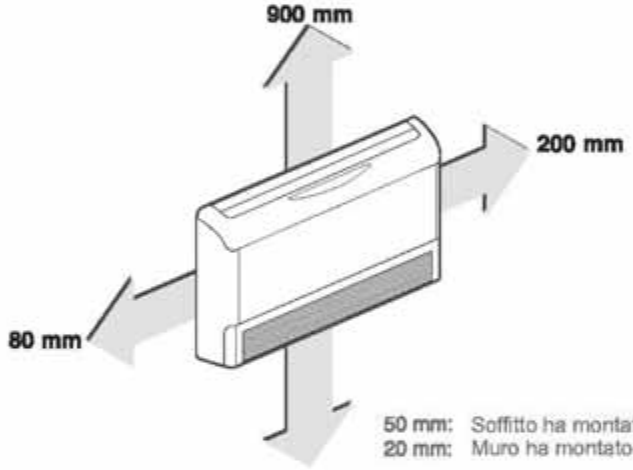
- Instalar el soporte mural del PXD utilizando la plantilla de montaje entregada con el aparato.
- El espacio libre que debe respetarse alrededor de este aparato se indica en la plantilla.

INSTALLATION OF THE PXD INDOOR UNIT

- *Install the wall support of the PXD using the installation template supplied with the unit*
- *The cut-outs for the unit are shown on this template.*

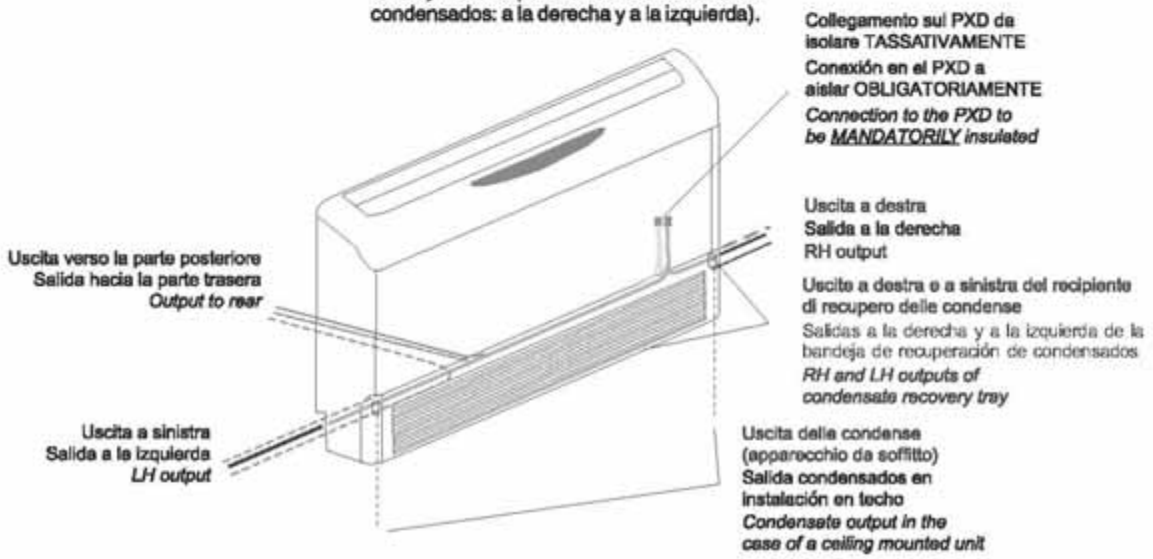


- Richiamo degli spazi liberi MINIMI da prevedere.
- Recordatorio del espacio MÍNIMO que hay que prever.
- *Reminder of MINIMUM clearances to be provided.*



50 mm: Soffitto ha montato - Instalación en techo - *ceiling mounted*
20 mm: Muro ha montato - Instalación mural - *wall mounted*

- Collegamenti frigoriferi possibili a destra, a sinistra e nella parte posteriore.
- Possibilità di scarico delle condense: a destra, a sinistra, nella parte anteriore e posteriore (caso apparecchio da soffitto) (2 uscite per le condense sono disponibili sul recipiente di recupero: a destra e a sinistra).
- Las conexiones frigoríficas pueden realizarse a la derecha, a la izquierda y en la parte trasera.
- Posibilidad de evacuación de los condensados: a la derecha, a la izquierda, en la parte frontal y en la parte trasera, si se trata de una instalación en techo (la bandeja de recuperación tiene 2 salidas de condensados: a la derecha y a la izquierda).
- *Coolant connections can be made on the LH side, on the RH side or at the rear.*
- *Condensate evacuation possibilities: right, left, rear and front in the case of a ceiling mounted unit. (2 condensate outputs are available on the recovery tray).*


Collegamento sul PXD da isolare TASSATIVAMENTE
Conexión en el PXD a aislar OBLIGATORIAMENTE
Connection to the PXD to be MANDATORILY insulated
Uscita a destra
Salida a la derecha
RH output
Uscite a destra e a sinistra del recipiente di recupero delle condense
Salidas a la derecha y a la izquierda de la bandeja de recuperación de condensados
RH and LH outputs of condensate recovery tray
Uscita verso la parte posteriore
Salida hacia la parte trasera
Output to rear
Uscita a sinistra
Salida a la izquierda
LH output
Uscita delle condense (apparecchio da soffitto)
Salida condensados en instalación en techo
Condensate output in the case of a ceiling mounted unit

CONTENT

INSTALLAZIONE

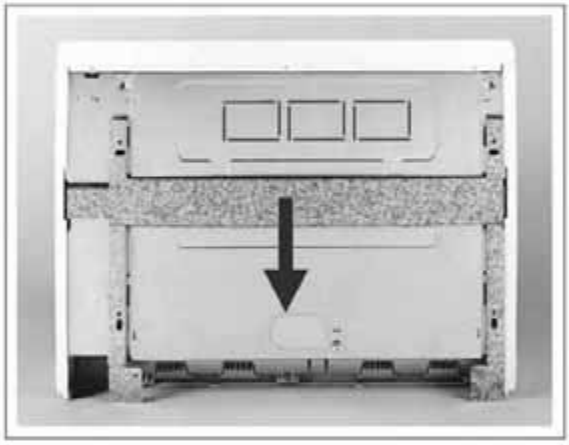
- Togliere el supporto da parete del PXD

INSTALACIÓN

- Retirar el soporte mural fijado en la parte trasera de su PXD.

INSTALLATION

- *Remove the wall support mounted at the rear of your PXD*



- Per l'installazione del supporto da parete, posizionare la sagoma onde rispettare l'interasse del fissaggio indicati su questo ultimo.

PRESTARE LA MASSIMA ATTENZIONE allo scarico delle condense:
Dopo aver determinato l'uscita di questo scarico condense, (sinistra, destra, posteriore), assicurarsi durante l'installazione del supporto da parete di ottenere un'inclinazione favorevole per questo scarico.

- Para la instalación del soporte mural, colocar la plantilla para respetar la distancia entre ejes de las fijaciones indicadas en ella.

ATENCIÓN a la evacuación de los condensados:
Después de haber determinado la salida de esta evacuación de condensados (izquierda, derecha, parte trasera), cuando se instale el soporte mural, comprobar que la inclinación es favorable para esta evacuación.

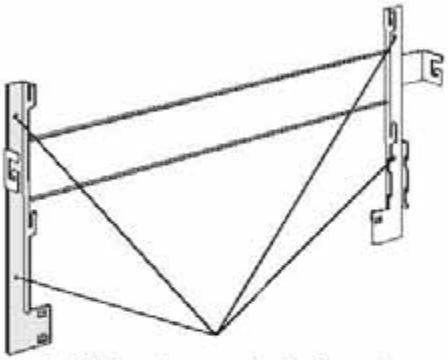
Scarico delle condense
Evacuacion de los condensados
Condensates evacuation

- *To install the wall support, locate the template in order to observe the correct distance between mounting holes marked on it.*

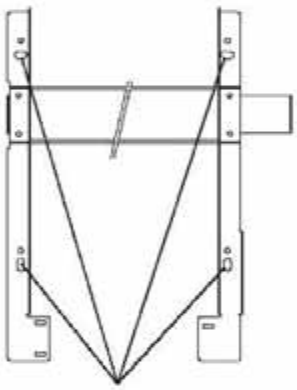
CAUTION - be careful with the condensate evacuation point:
After determining the outlet for the condensate evacuation (LH, RH, rear), make sure that the wall mounting is installed with a slope which favours this evacuation.

- **Attenzione a non mettere contropenza per lo scarico delle condense**
- **Atención: No poner una contrapendiente para la evacuación de los condensados.**
- ***Take care to install unit with a positive slop for condensate drainage***

- Fissare il supporto da parte con 4 viti (non fornite).
- Fijar el soporte mural con 4 tornillos (no incluidos).
- *Secure the wall support with 4 screws (not supplied)*



Fori di fissaggio per montaggio alla parete
Orificios de fijación para enganche mural
Mounting holes for wall installation



Localizzazione delle aste filettate (Ø 8 mm max.) per montaggio al soffitto.

Emplazamiento de las varillas roscadas (Ø 8 mm máx.) para un enganche en techo.

Location of threaded rods (Dia 8 mm max.) for ceiling installation

CONTENT

INSTALLAZIONE DELL'UNITÀ ESTERNA

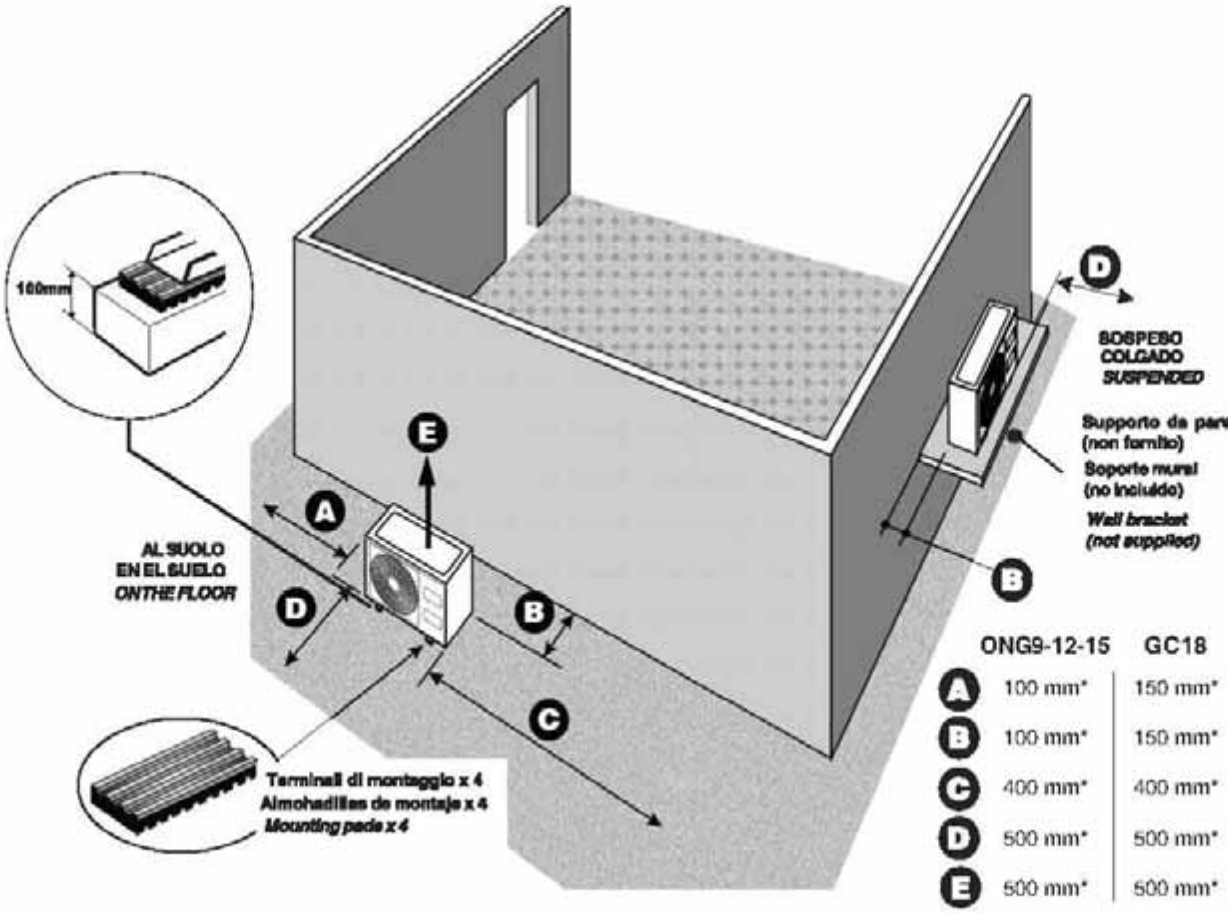
- Spazio libero minimo da prevedere (in mm)

INSTALACIÓN DE LA UNIDAD EXTERIOR

- Espacio mínimo a prever (en mm).

INSTALLATION OF THE OUTDOOR UNIT

- *Minimum clearance to respect (in mm).*



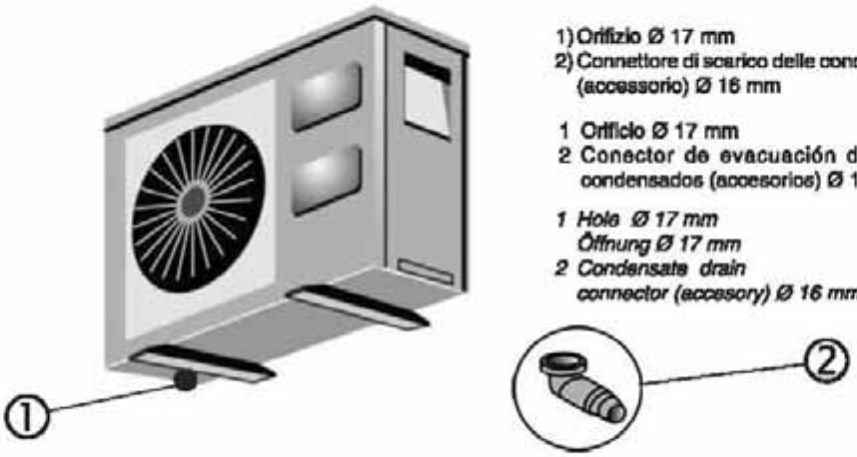
	ONG9-12-15	GC18	OU7-8
A	100 mm*	150 mm*	150 mm*
B	100 mm*	150 mm*	200 mm*
C	400 mm*	400 mm*	400 mm*
D	500 mm*	500 mm*	1500 mm*
E	500 mm*	500 mm*	1000 mm*

*mínimo
*mínimo / *como mínimo / minimum

SCARICO DELLE CONDENSE

EVACUACION DE LOS CONDENSADOS

CONDENSATES EVACUATION



1) Orifizio Ø 17 mm
2) Connettore di scarico delle condense (accessorio) Ø 16 mm

1 Orificio Ø 17 mm
2 Conector de evacuación de los condensados (accesorios) Ø 16 mm

1 Hole Ø 17 mm
Öffnung Ø 17 mm
2 Condensate drain connector (accessory) Ø 16 mm

ATTENZIONE

Qualora l'unità esterna reversibile fosse installata in zone climatiche dove la temperatura esterna può essere inferiore a +1°C, è tassativo prevedere un sistema di prevenzione degli eventuali rischi di congelazione delle condense (esempio: cordone riscaldante).

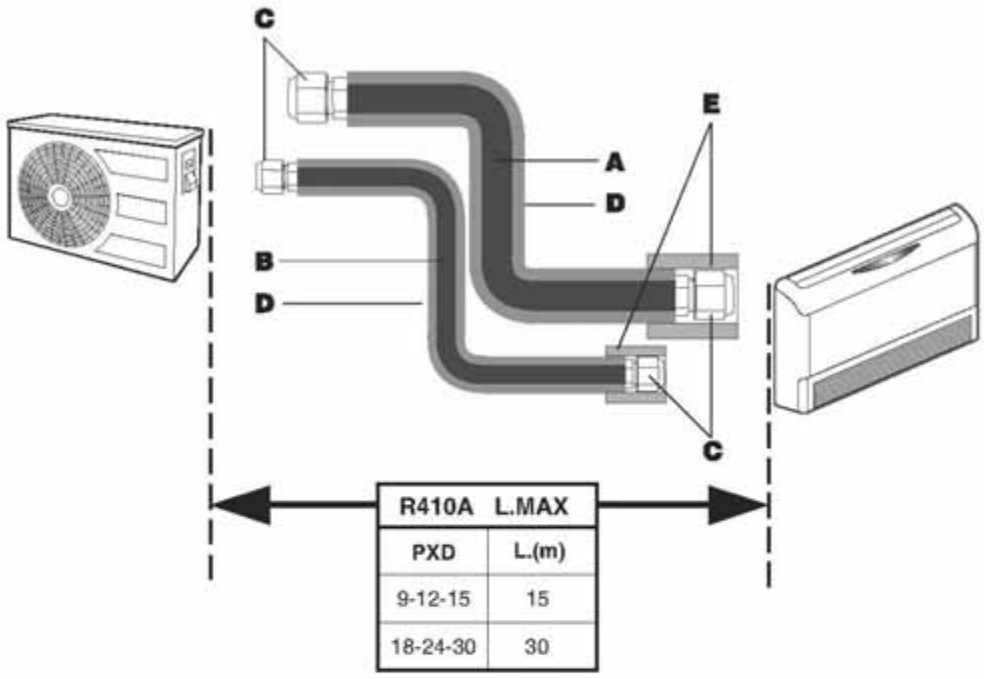
ATENCIÓN:

Si la unidad exterior reversible se instala en zonas climáticas en las que la temperatura exterior pueda ser inferior a +1ºC, es necesario prever un sistema para evitar los eventuales riesgos de congelación de los condensados (cordón térmico, por ejemplo).

CAUTION

If the heat pump outdoor unit is installed in an area where the outdoor temperature may fall below +1°C, it is mandatory to provide a system preventing any risk of freezing of the condensate (e.g. heating wire).

COLLEGAMENTI FRIGORIFERI — CONEXIONES FRIGORÍFICAS — *REFRIGERANT CONNECTIONS*

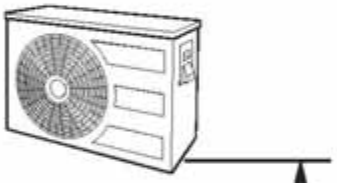


R410A L.MAX	
PXD	L.(m)
9-12-15	15
18-24-30	30

A Tubo "Gas"
B Tubo "Liquido"
C Dado Flare
D Isolamento dei tubi (6 mm minimo)
E Manicotto isolante

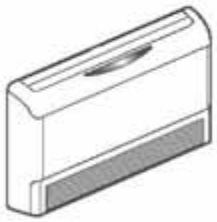
A Tubo "Gas"
B Tubo "Líquido"
C Tuerca Flare
D Aislamiento de los tubos (6mm mín.)
E Manguito aislante

A "Gas" pipe
B "Liquid" pipe
C Flare nut
D Pipe insulation (6 mm min.)
E Insulation sleeve



ONG9-12-15 **H = 7m MAX***

* senza sifone
* sin sifón
** without siphon*



GC18
OU7-8 **H = 10m MAX**

- Posizionare un sifone sulla linea Gas ogni 3 metri.
- Colocar cada 3 m. un sifón en la línea Gas.
- *Fit a siphon on the Gas line every 3m.*

- L'unità interna può essere installata al di sopra come al di sotto dell'unità.
- I collegamenti FLARE sono disponibili come accessorio, in lunghezze fisse: 2,5 – 5 – 8 metri.
- I tubi vengono forniti avvolti e dotati di dadi FLARE.
- Srotolare accuratamente i tubi nel senso contrario delle spire per non piegare questi ultimi.

- La unidad interior puede instalarse encima o debajo de la unidad.
- Las conexiones FLARE están disponibles, como accesorio, en longitudes fijas: 2,5 - 5 - 8 m.
- Los tubos se suministran enrollados y equipados de tuercas FLARE.
- Desenrollar cuidadosamente los tubos en el sentido inverso a las espiras, para no plegarlos.

- *The indoor unit may be installed above or below the unit*
- *The flare couplings are available as accessories in standard lengths of 2.5, 5 and 8 m.*
- *The pipes are delivered coiled and equipped with flare nuts.*
- *Carefully uncoil the pipes in the opposite direction from the turns so as not to flatten them.*

CONTENT

POSIZIONAMENTO DEL TUBING SUL SUPPORTO DA PARETE

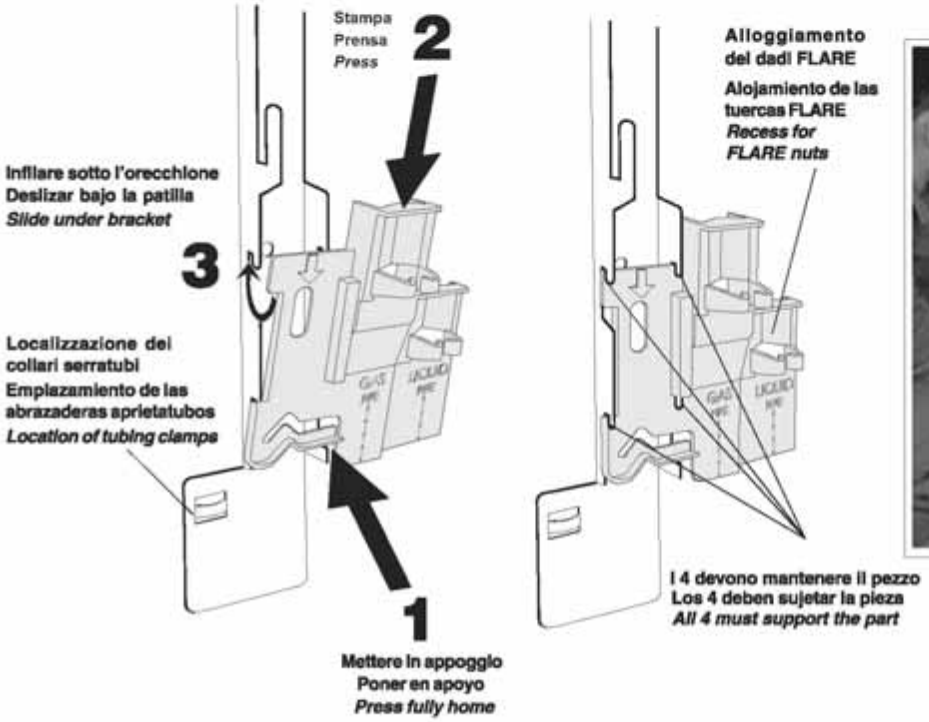
- Il principale vantaggio del vostro prodotto PXD è la possibilità di posizionare i tubi frigoriferi sul supporto da parete prima del posizionamento del vostro apparecchio (mediante utilizzo della sagoma fornita).
  NOTA: è tuttavia possibile fissare l'apparacchio alla parete prima del posizionamento del tubi.
- Posizionare la sagoma di posizionamento dei tubi sul supporto da parete.

INSTALACIÓN DEL TUBING SOBRE EL SOPORTE MURAL

- La principal ventaja de su producto PXD es la posibilidad de colocar los tubos frigoríficos sobre el soporte mural antes de instalar el aparato (utilizando la plantilla suministrada).
  NOTA: No obstante, es posible fijar el aparato al muro antes de instalar los tubos.
- Poner la plantilla de posicionamiento de los tubos en el soporte mural.

INSTALLATION OF TUBING ON WALL SUPPORT

- *The main advantage of your PXD product is the possibility of locating the coolant tubing on the wall support before installing the unit (using the template supplied).*
  ***NOTA:** Fix a support of pipes accommodation on the wall fastening.*
- *Place the tube locating template on the wall support.*



POSIZIONAMENTO DEL TUBING SUL SUPPORTO A PARETE

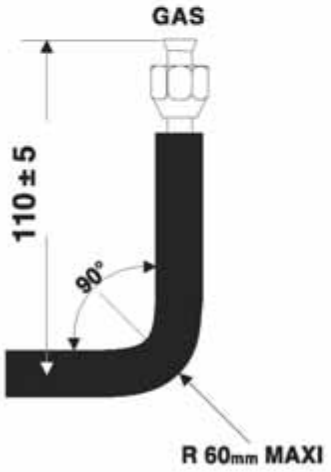
- Dopo aver scelto il vostro arrivo dei tubi frigoriferi (destra, sinistra o posteriore), si può realizzare il tubing. Occorrerà utilizzare la sagoma di montaggio onde incurvare correttamente i tubi per facilitare il collegamento.

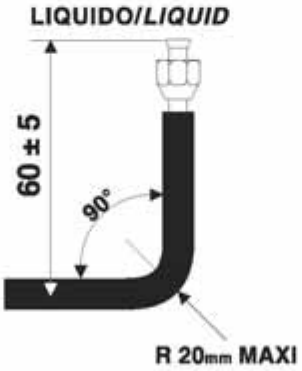
INSTALACIÓN DEL TUBING SOBRE EL SOPORTE MURAL

- Después de haber decidido la posición de llegada de los tubos frigoríficos (a la derecha, a la izquierda o en la parte trasera), se puede realizar el tubing. Para ello, utilice la plantilla de montaje con objeto de curvar los tubos correctamente y facilitar su conexión.

INSTALLATION OF TUBING ON WALL SUPPORT

- *After choosing your coolant tubing input location (right, left or rear), you can set up your tubing. To do this, use the installation template in order to form the tubes correctly and thus facilitate connection.*





	Ø tubo GAS Ø tubo de GAS *Ø GAS tube*	Ø tubo LIQUIDO Ø tubo de LIQUIDO *Ø LIQUID tube*
PXD 9	3/8"	1/4"
PXD12	3/8"	1/4"
PXD 15-18	1/2"	1/4"
PXD 24-30	5/8"	3/8"

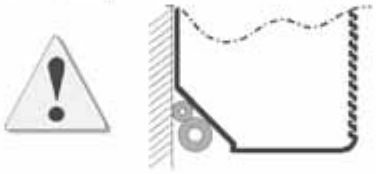
CONTENT

POSIZIONAMENTO DEL TUBING SUL SUPPORTO DA PARETE

- Per una buona installazione dei tubi, posizionare il tubo LIQUIDO in alto ed il tubo GAS al di sotto di questo ultimo.

INSTALACIÓN DEL TUBING SOBRE EL SOPORTE MURAL

- Para instalar correctamente los tubos, sitúe el tubo de LÍQUIDO encima y el tubo de GAS debajo.



INSTALLATION OF TUBING ON WALL SUPPORT

- *Locate the LIQUID tube above the GAS tube.*

- Posizionare i dadi dei tubi (incurvati) nell'apposito alloggiamento della sagoma.
- Mantenere i tubi i posizione mediante i collari in dotazione.
- Togliere la sagoma tubi, si può quindi montare l'apparecchio sul suo supporto.

- Ponga las tuercas de los tubos (curvados) en el alojamiento previsto en la plantilla.
- Sujete los tubos con las abrazaderas suministradas.
- Retire la plantilla de los tubos para poder montar el aparato en su soporte.

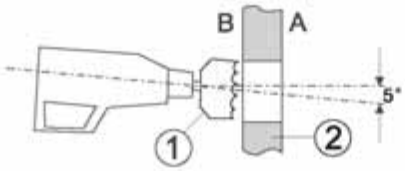
- *Fit the nuts of the (formed) tubing into the recess provided on the template.*
- *Secure the tubing with the clamps provided.*
- *Remove the tubing template; you can now install your unit on its support.*

NOTA
uscita verso la parte posteriore
- Il foro inclinato permette di evitare l'ingresso delle condense o della pioggia.
- Posizionare nel foro, un manicotto Ø 70 mm

NOTA
salida hacia la parte trasera
- El orificio inclinado evita la entrada de los condensados o de la lluvia.
- Coloque en el orificio un manguito Ø 70 mm.

NOTE
output to the rear
- *The slanted hole prevents condensates or rain from entering the unit.*
- *Fit a Dia. 70 mm sleeve into the hole.*

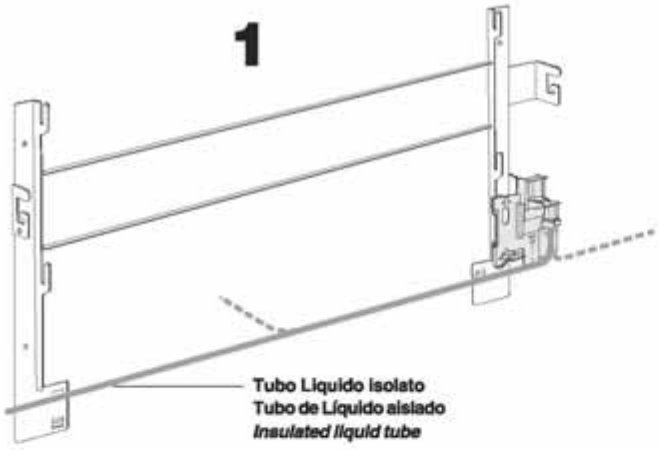
A Lato esterno
B Lato interno
1 Trapano Ø 70 mm
2 Parete



A Lado exterior
B Lado interior
1 Taladro Ø 70 mm
2 Muro

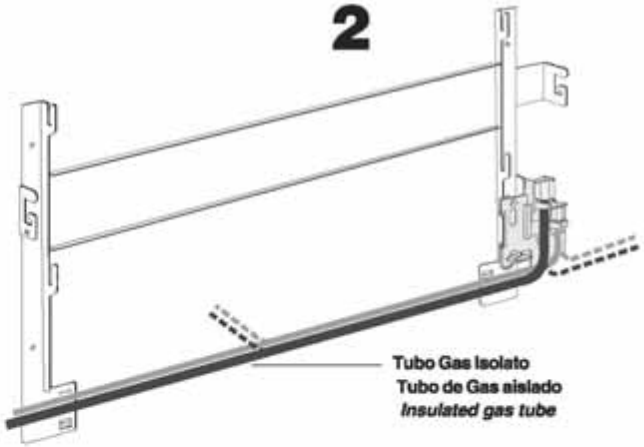
A Outside
B Inside
1 Drill Dia. 70 mm
2 Wall

1



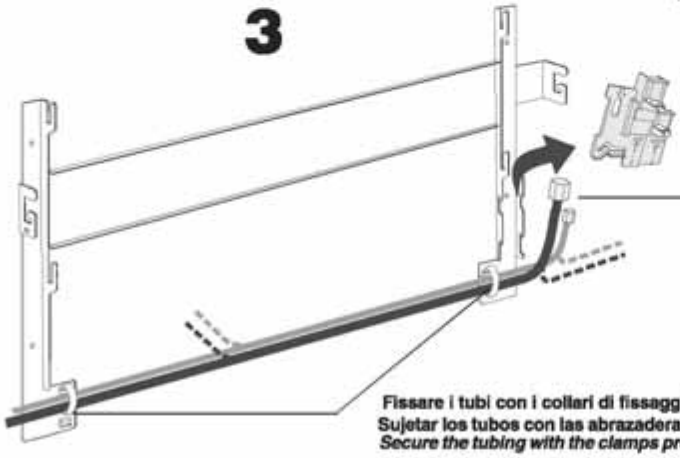
Tubo Liquido isolato
Tubo de Líquido aislado
Insulated liquid tube

2



Tubo Gas Isolato
Tubo de Gas aislado
Insulated gas tube

3



Togliere la sagoma di tubo
Retirar la plantilla de tubo
Remove the template

ATTENZIONE
Proteggere i tubi onde non lasciare penetrare impurità nel circuito frigorifero.
ATENCIÓN
Proteger los tubos para que no penetren impurzas en el circuito frigorifico.
WARNING
The tubes must be closed to prevent impurities from entering

Fissare i tubi con i collari di fissaggio in dotazione
Sujetar los tubos con las abrazaderas de fijación suministradas
Secure the tubing with the clamps provided

CONTENT

INSTALLAZIONE DELL'UNITÀ INTERNA PXD

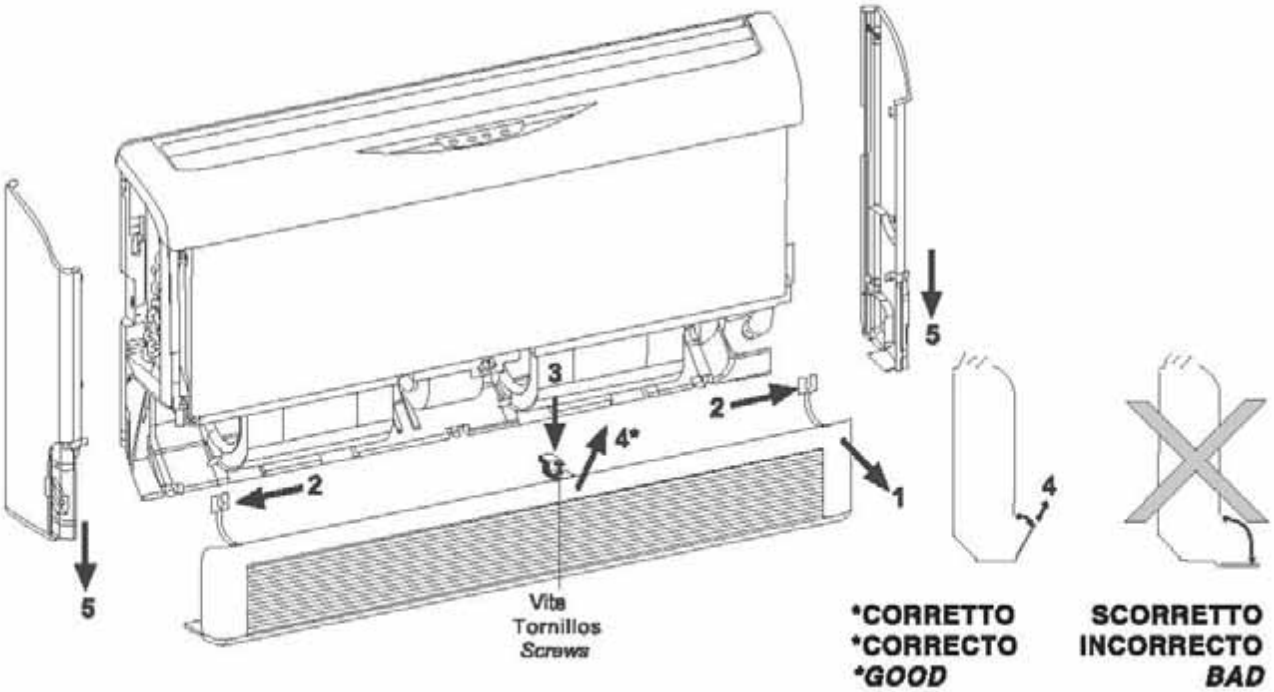
- Sul PXD, smontare:
La griglia di aspirazione
Le fiancate destra e sinistra

INSTALACIÓN DE LA UNIDAD INTERIOR PXD

- En el PXD, desmontar:
La rejilla de aspiración
Los paneles laterales derecho e izquierdo

INSTALLATION OF THE INDOOR UNIT PXD

- *On the PXD, remove:*
The intake grid
The LH and RH side panels



PER LA GRIGLIA DI ASPIRAZIONE:

1 Tirare la griglia in avanti.
2. Togliere le due viti di estremità.
3. Allentare la vite centrale senza toglierla interamente.
4. Sganciare la griglia.

PARA LA REJILLA DE ASPIRACIÓN:

1 Tirar de la rejilla hacia delante.
2 Retirar los dos tornillos de los extremos.
3 Aflojar el tornillo central sin retirarlo completamente.
4 Desenganchar la rejilla.

FOR THE INTAKE GRID:

1 Pull the grid forwards.
2 Remove the two end screws.
3 Unscrew the central screw, but do not remove it completely.
4 Unhook the grid.

PER LE FIANCATE:

5. Rimuovere le fiancata (movimento verso il basso).

PARA LOS PANELES LATERALES:

5 Retirar los paneles laterales (movimiento hacia abajo).

FOR THE SIDE PANELS:

5 Remove the side panels (downward movement)

INSTALLAZIONE DEL PXD SUL SUPPORTO DA PARETE

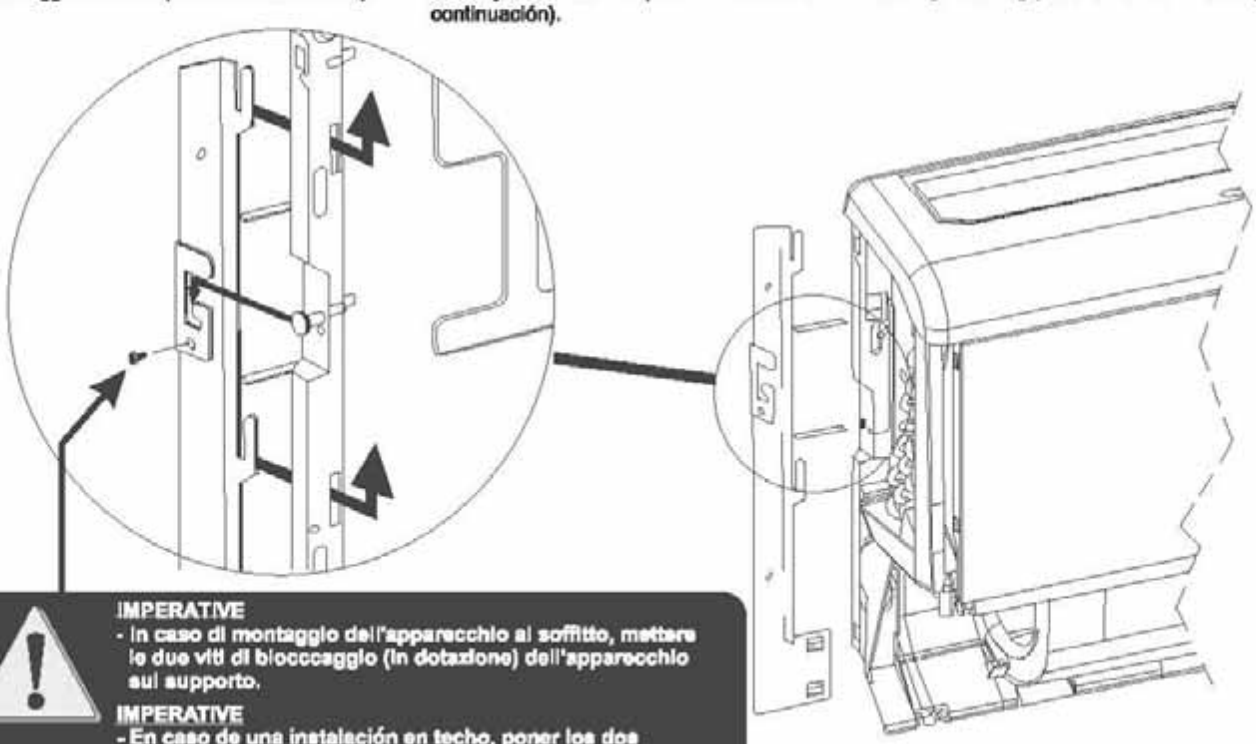
- Vedi disegno di cui sotto per il montaggio del PXD.
- Montaggio al soffitto (vedi NOTA di cui sotto).

INSTALACIÓN DEL PXD EN EL SOPORTE MURAL

- Ver el croquis que figura a continuación para el montaje del PXD.
- Montaje en techo (ver la NOTA a continuación).

INSTALLATION OF THE PXD ONTHE WALL SUPPORT

- *Refer to the diagram below, for installation of the PXD.*
- *Ceiling mounting (refer to the NOTE below).*



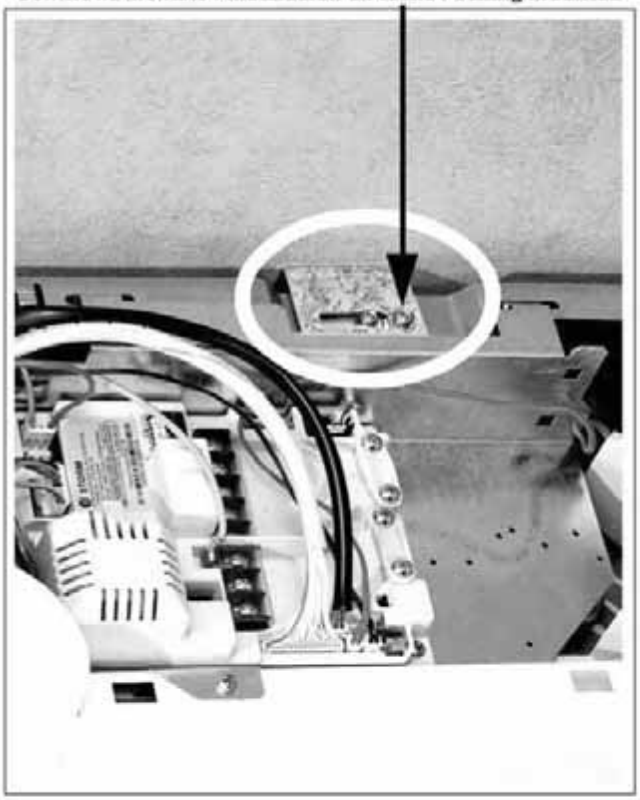
IMPERATIVE
- In caso di montaggio dell'apparecchio al soffitto, mettere le due viti di bloccaggio (in dotazione) dell'apparecchio sul supporto.

IMPERATIVE
- En caso de una instalación en techo, poner los dos tornillos de bloqueo (suministrados) del aparato en el soporte.

IMPERATIVE
- For ceiling mounting, install the two clamp screws (provided) for the unit on the support.

*Muro ha montato / **instalacion mural / wall mounted***

*Soffitto ha montato / **instalacion en techo / ceiling mounted***



COLLEGAMENTO DEL TUBO DI SCARICO DELLE CONDENSE

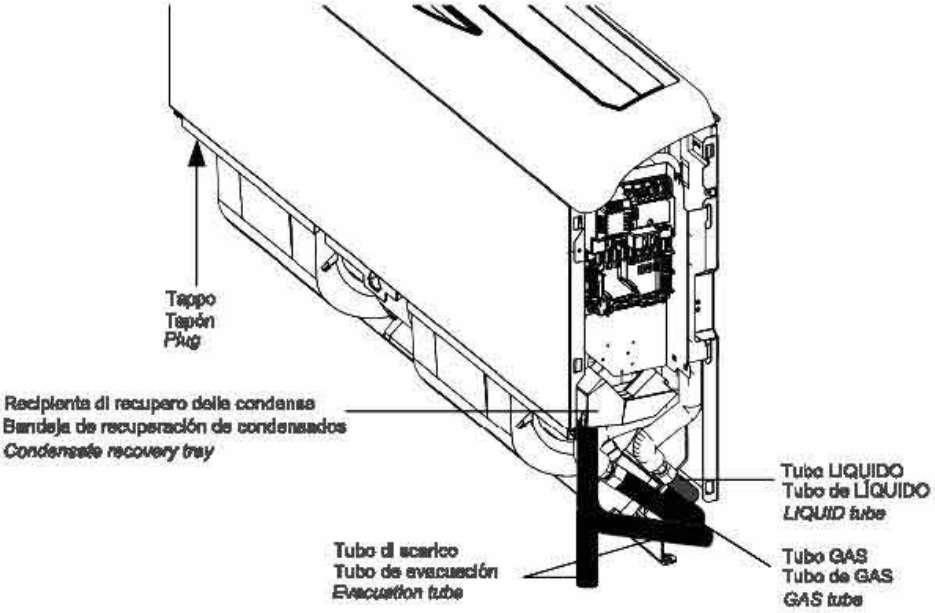
- L'acqua condensata deve essere direttamente scaricata verso l'esterno. Rispettare la pendenza della canalizzazione di scarico nel senso di scorrimento in caso di raccordo alla rete fognaria (2,5 cm/mm).
- E' necessario montare un sifone sulla canalizzazione di scarico e al di sotto del livello del recipiente di recupero dell'acqua dell'apparecchio.
- Prevedere l'isolamento del tubo di scarico in caso di rischio di gelo o di condensa.
- Scarico con kit pompa: (vedi manuale fornito con il kit).
- L'apparecchio viene fornito con un tubo di scarico.
- Le uscite sinistra e destra vengono otturate da un tappo. **Non dimenticare di togliere il tappo prima di eseguire il collegamento del tubo di scarico.**

CONEXIONES DEL TUBO DE EVACUACIÓN DE CONDENSADOS

- El agua condensada debe ser evacuada directamente hacia el exterior. En caso de una conexión a la alcantarilla (2,5 cm/m), respetar la pendiente de la canalización de evacuación en el sentido de la circulación.
- Es necesario instalar un sifón en la canalización de evacuación y por debajo del nivel de la bandeja de recuperación de agua del aparato.
- En caso de riesgo de helada o de condensación, prever el aislamiento del tubo de evacuación.
- Evacuación con kit bomba (ver las instrucciones suministradas con el kit).
- El aparato se entrega con un tubo de evacuación.
- Las salidas izquierda y derecha estan tapadas con un tapón. **No olvidar retirarlo de conectar el tubo de evacuación.**

CONNECTION OF CONDENSATE EVACUATION TUBE

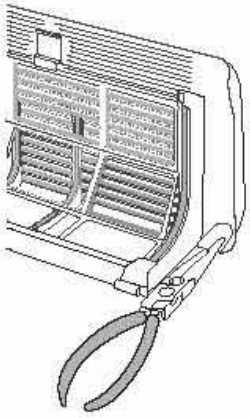
- *Water condensation must be evacuated directly to the outside; observe an appropriate slope for the evacuation duct, which should slope downwards in the case of a connection to the wastewater system (2.5 cm/m slope).*
- *An S-bend must be installed on the evacuation duct, below the level of the recovery tray of the unit.*
- *Provide insulation for the evacuation tube in the case of a risk of freezing or condensation.*
- *Evacuation with pump kit: (refer to instructions provided with kit).*
- *The unit is supplied with an evacuation tube.*
- *The right and left outlets are blocked off by a plug. Do not forget to remove this plug before connecting the evacuation tube.*

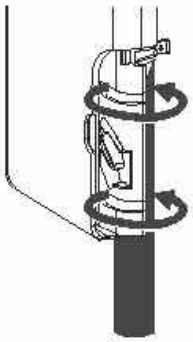


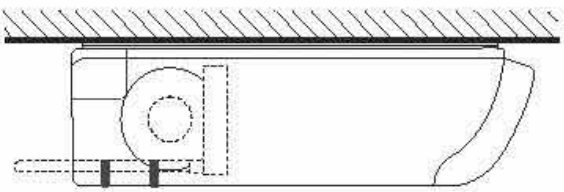
- In caso di un montaggio dell'apparecchio al soffitto, far scendere il tubo di scarico lungo la fiancata e fissarlo con collari come indicato nel disegno di cui sotto. Spaccare la parte preschiacciata situata nell'angolo della griglia di aspirazione.

- En caso de una instalación con soporte de techo, hacer descender el tubo de evacuación a lo largo del panel lateral y fijarlo con abrazaderas como se indica a continuación. Romper también el prerrecortado en el ángulo de la rejilla de aspiración.

- *In the case of a ceiling mounted installation, run the evacuation tube down along the side panel and secure it with clamps as shown below. Also break the preformed cut-out in the corner of the intake grid.*







CONTENT

SVUOTAMENTO DEI TUBI FRIGORIFERI E DELL'UNITÀ INTERNA

- Il carico in R22 viene immesso soltanto nel cassone esterno. L'unità interna contiene una piccola quantità di gas neutro. Pertanto dopo aver installato i collegamento, occorre tassativamente svuotare i collegamenti e l'unità interna.

PROCEDURA DI MONTAGGIO

- Il gruppo esterno possiede una valvola che permette lo svuotamento dell'installazione (grossa valvola).

1. Collegare i tubi di collegamento al cassone esterno e all'unità interna.

- Per ottenere un buon serraggio, ricoprire la superficie con dell'olio di refrigerazione.

- L'utilizzo di una controchiave è indispensabile per il serraggio delle valvole.

- I valori della coppia di serraggio vengono riportati nella tabella di cui sotto

Ø dei tubi	Coppia
Tubo 1 / 4"	15-20 Nm
Tubo 3 / 8"	30-35 Nm
Tubo 1 / 2 "	50-54 Nm
Tubo 5 / 8"	70-75 Nm
Tubo 7 / 8 "	90-95 Nm

2. Collegare la pompa a vuoto al raccordo flare del cassone esterno dotato della valvola di servizio (grosso raccordo).
3. Mettere la pompa a vuoto in funzione e verificare che l'ago dell'indicatore scenda a 0,2 mm Hg.
   La pompa deve funzionare per almeno 15 minuti.
4. Prima di togliere la pompa a vuoto, occorre verificare che l'indicatore di vuoto sia stabile per almeno cinque minuti.
5. Scollegare la pompa a vuoto e chiudere la valvola di servizio.
6. Togliere il tappo della valvola "GAS" e "LIQUIDO" e aprirli per mezzo di una chiave esagonale onde liberare l'R22 contenuto nel gruppo esterno.
7. Nel caso in cui il collegamento frigorifero di una via sia superiore a 4 metri, procedere al complemento di carico come dalle indicazioni contenute nella tabella B pagina 18. Alcune unità richiedono un'aggiunta di carico come dalle indicazioni contenute nella tabella A pagina 17.
8. Verificare la tenuta stagna dei collegamenti. Utilizzare un rilevatore di fuga elettronico o una spugna insaponata.

VACÍO DE LOS TUBOS FRIGORÍFICOS Y DE LA UNIDAD INTERIOR

- La carga de R22 sólo se encuentra en la unidad exterior. La unidad interior contiene una pequeña cantidad de gas neutro. Por este motivo, después de haber instalado las conexiones hay que hacer el vacío obligatoriamente en las conexiones y en la unidad interior.

PROCEDIMIENTO DE MONTAJE

- El grupo exterior posee una válvula que permite hacer el vacío de la instalación (válvula grande).

1 Conectar los tubos de conexión a las unidades exterior e interior.

- Para que el apriete sea correcto, cubrir la superficie con aceite de refrigeración.

- Es indispensable utilizar una contrallave para apretar las válvulas.

- Los valores del par de apriete se indican en el siguiente cuadro.

Ø de los tubos	Par
Tubo 1 / 4"	15-20 Nm
Tubo 3 / 8"	30-35 Nm
Tubo 1 / 2 "	50-54 Nm
Tubo 5 / 8"	70-75 Nm
Tubo 7 / 8 "	90-95 Nm

2 Conectar la bomba de vacío al racor Flare de la unidad exterior equipada de la válvula de servicio (racor grande).
3 Poner la bomba de vacío en marcha y verificar que la aguja del indicador desciende a 0,2 mm Hg.
La bomba debe funcionar durante 15 minutos como mínimo.
4 Antes de retirar la bomba de vacío, hay que verificar que el indicador de vacío se mantiene estable durante cinco minutos.
5 Desconectar la bomba de vacío y cerrar la válvula de servicio.
6 Retirar el tapón de las válvulas "GAS" y "LÍQUIDO", y abrirlas con una llave hexagonal para liberar el R22 del grupo exterior.
7 En caso de que la conexión frigorífica de una vía sea superior a 4 m, efectuar un complemento de carga según indica el cuadro B de la página 18. Algunas unidades necesitan un complemento de carga según el cuadro A de la página 17.
8 Verificar la estanqueidad de las conexiones. Utilizar un detector de fugas electrónico o una esponja jabonosa.

VACUUM OF COOLING PIPES AND INDOOR UNIT

- Only the outdoor unit is charged with R22 cooling fluid. The indoor unit contains a small quantity of a neutral gas. This the reason it is imperative to vacuum the linking pipes and the indoor unit.

ASSEMBLY

- *The outdoor unit is equipped with a valve allowing to vacuum the installation (large valve)*

1 Connect the connecting pipes to the outdoor unit by FLARE NUTS and to the indoor unit by BRAZING

- *To obtain the right tightening, cover the surface with cooling oil.*

- *The use of a counter wrench is required to tighten the valves.*

- *The values of the tightening torque are shown in the table below.*

Ø of the Pipe	*Torque*
Pipe 1/4"	*15-20 Nm*
Pipe 3/8"	*30-35 Nm*
Pipe 1/2"	*50-54 Nm*
Pipe 5/8"	*70-75 Nm*
Pipe 7/8"	*90-95 Nm*

2 Connect the vacuum pump with the flare coupling of the outdoor unit equipped with a process valve.
3 Start the vacuum pump and check that the needle of the indicator goes down to - 0,2 mm Hg.
The pump should run during at least 15 minutes.
4 Before disconnecting the vacuum pump, check that the vacuum indicator remains in the same position during five minutes.
5 Disconnect the vacuum pump.

6 Remove the cap of the "GAS" and "LIQUID" valves and open them with a hexagonal wrench to free the R22 contained in the outdoor unit.
*7 If the length of the refrigerant pipes of one line exceeds 4m, add the extra charge indicated in the table **B** page 18.*
*Certain units require an additional charge as per Table **A** page 17.*

8 Check that the linking pipes are sealed. Use an electronic leak detector or a soapy sponge.

CONTENT

COLLEGAMENTI ELETTRICI

Configurazione elettronica

! DA ESEGUIRE FUORI TENSIONE

- Il vostro apparecchio viene configurata in versione FREDDO SOLTANTO.
- Per configurare in versione FREDDO SOLTANTO + Riscaldamento Termodinamico, procedere come segue:
- Togliere la presa di configurazione contrassegnata ST e sostituirla con la presa di configurazione contrassegnata RC (fissata sulla scheda elettronica).
- Scollegare la resistenza 4,7 KW e collegare il filo di sonda in dotazione.

CONEXIONES ELÉCTRICAS

Configuración electrónica

EFECTUAR FUERA DE TENSIÓN

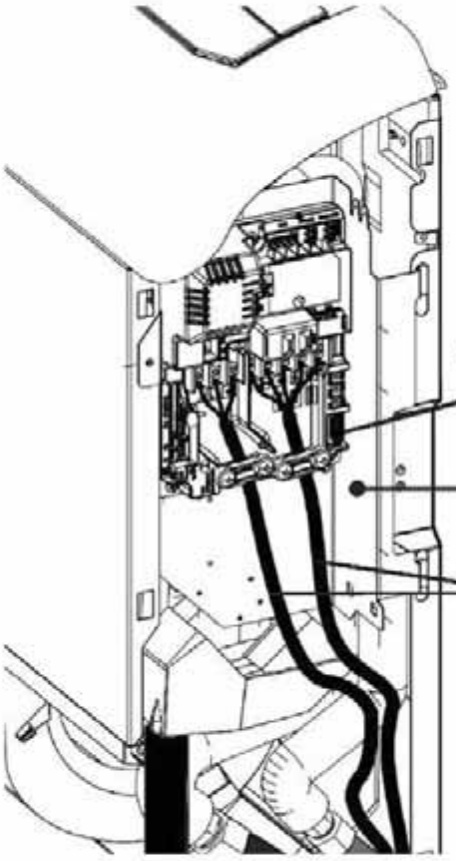
- Su aparato ha sido configurado en versión SÓLO FRÍO.
- Para configurarlo en versión SÓLO FRÍO + Calefacción Termodinámica:
- Retirar la toma de configuración marcada ST y cambiarla por la toma de configuración marcada RC (fijada en la tarjeta electrónica).
- Desconectar la resistencia 4,7 kW y conectar el hilo de sonda suministrado.

ELECTRICAL CONNECTIONS

Electronic configuration

TO BE CARRIED OUT WITH THE ELECTRICAL SYSTEM DE-ENERGISED

- *Your unit is configured for **COOLING ONLY.***
- *To configure for **HEATPUMP:***
- *Remove the configuration connector marked **ST** and replace it with the configuration connector marked **RC** (mounted on the electronic circuit board)*
- *Disconnect the 4.7 KΩ resistor and connect the sensor wire supplied (white).*


Plug di configurazione installato (RC)
Plug de configuración instalado en fábrica (CR)
Factory installed configuration plug (FIC)
Lato lamiera
Lado chapa
(metal panel side)
Cavi elettrici da installare come da specifiche allegate
Cables eléctricos a instalar según las especificaciones adjuntas
Electric cables to be installed according to attached specifications

Possibilità di far ruotare la scatola elettrica (togliere la vite)
Es posible girar la caja eléctrica (retirar el tornillo)
The control panel can be swung open (remove the screw)

ATTENZION:

Il plug possiede una piccola freccia che indica il senso di inserimento. La faccia dove si trova la freccia deve trovarsi verso la parte posteriore dell'apparecchio (sulla piastra elettrica, lato lamiera).

ATENCIÓN:

El plug posee una pequeña flecha para indicar el sentido de enchufado. La cara donde se encuentra la flecha debe estar hacia la parte trasera del aparato (en la pletina eléctrica, por el lado chapa).

CAUTION:

There is a small arrow on the plug, showing the correct plug-in orientation. The face marked with the arrow should be turned towards the rear of the unit (on the electrical panel, metal panel side).

Verso il lato lamiera
hacia el lado chapa
towards metal panel side

CONTENT

CONFIGURAZIONE DEL TELECOMANDO

Per modificare la configurazione:

1 Togliere le pile.
2 Posizionare gli switch.
3 Eseguire TASSATIVAMENTE un RESET (vedi qui di seguito)
4 Rimettere le pile.

CONFIGURACIÓN DEL MANDO A DISTANCIA

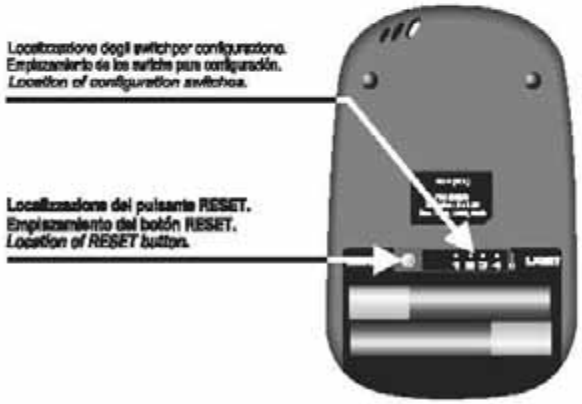
Para cambiar de configuración:

1 - Retirar las pilas.
2 - Posicionar los switchs.
3 - Efectuar OBLIGATORIAMENTE un RESET (ver a continuación).
4 - Colocar las pilas.

CONFIGURATION OF REMOTE CONTROL

To change the configuration:

1 - Remove the batteries.
2 - Set the switches.
3 - MANDATORILY perform a RESET (see below).
4 - Reinstall the batteries.


Localizzazione degli switch per configurazione.
Emplazamiento de los switchs para configuración.
Location of configuration switches.
Localizzazione del pulsante RESET.
Emplazamiento del botón RESET.
Location of RESET button.

FUNZIONE RESET:

1) Togliere 1 pila.
2) Premere contemporaneamente i 4 tasti qui di seguito riportati fino a spegnimento dei simboli.
3) Rimettere la pila.

I quattro tasti interessati sono:

FUNCIÓN RESET:

1) Retirar 1 pila.
2) Mantener pulsadas simultáneamente estas 4 teclas hasta que se apaguen los símbolos.
3) Colocar la pila.

Las cuatro teclas son las siguientes:

RESET FUNCTION:

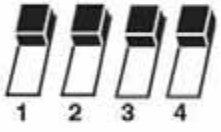
1 - Remove one battery.
2 - Simultaneously press these 4 keys until the symbols are no longer displayed.
3 - Reinstall the battery.

The four keys to be pressed are:

Reversibile (senza modo Caldo / Freddo auto.)
Reversible (sin modo Calor / Frío automático)
Heat / Cool (without auto Cool / Heat mode)

Reversibile (tutti i modi disponibili)
Reversible (todos los modos disponibles)
Heat / Cool (all modes available)

Modo Calor / Frío auto
ático o modo sólo ventilación
Auto Cool / Heat mode or fan mode



CONTENT

SPECIFICHE ELETTRICHE — ESPECIFICACIONES ELÉCTRICAS — *ELECTRIC SPECIFICATIONS*

TIPO D'APPARECCHIO		PXD 9	PXD 12	PXD 15	PXD 18	PXD 24	PXD 30	TIPO DE APARATO	*TYPE OF APPLIANCE*
~230V - 50Hz		*	*	*	*	*	*	~230 V - 50 Hz	*~230 V - 50 Hz*
FREDDO + VENTILAZIONE DEL RISCALDAMENTO TERMO.								FRIO + VENTIL. o CALEFACCION TERMO.	*COOLING+VENTILATION OR THERMO HEATING*
Intensità nominale	A	5.2	7.4	8.5	11.9	14.2	16.2	Intensidad nominal	*Nominal current*
Intensità massimale	A	7.6	10.4	12	16	19.7	23.5	Intensidad maxima	*Maximum current*
Calibro fusibile aM	A	8	12	12	16	20	25	Calibre fusible aM	*Fuse rating aM*
Calibro fusibile ASE/VDE*	A	10	16	16	16	20	25	Calibre fusible ASE/VDE*	*Fuse rating ASE/VDE**
Sezione di cavo alim.*	mm^2	3X1.5	3X1.5	3X1.5	3X1.5	3X2.5	3X2.5	Sección de cable alim.*	*Power supply cable**
Collegamenti PXD / GC								Conexiones PXD / GC	*Linking pipes PXD / GC*
Sezione del cavo* ⊕ ⊕	mm^2	5X1.5	5X1.5	5X1.5	5X1.5	5X1.5	5X1.5	Sección de cable* ⊕ ⊕	*Cable section** ⊕ ⊕
MODO DESUMIDIFCAZIONE (FREDDO + VENTILAZIONE + RISCALDAMENTO ELETTRICO) OU Riscald.Thermo + Riscald.Elet.								MODO DESHUMIDIFICACION (FRIO + VENTILACION + CALEFACCINO ELEC.) O Calor termo + Calor elec.	*DESHUMIDIFYING MODE (COOLING+VENTILATION + ELECTRIC HEATING) OR THERMO HEATING + ELECTRIC HEATING*
ntensità nominale	A	9.5	11.7	12.8	18.4	20.7	22.7	Intensidad nominal	*Nominal current*
Intensità massimale	A	12.8	15.6	17.2	23.9	27.6	31.4	Intensidad maxima	*Maximum current*
Calibro fusibile aM	A	16	16	20	25	32	32	Calibre fusible aM	*Fuse rating aM*
Calibro fusibile ASE/VDE*	A	16	16	20	25	35	35	Calibre fusible ASE/VDE*	*Fuse rating ASE/VDE**
Sezione del cavo alim.*	mm^2	3X1.5	3X1.5	3X1.5	3X1.5	3X1.5	3X1.5	Sección de cable alim.*	*power supply cable***
Collegamenti PXD / GC								Conexiones PXD / GC	*Linking pipes PXD / GC*
Sezione del cavo* ⊕ ⊕ +riscald. Elec	mm^2	5X1.5	5X1.5	5X1.5	5X1.5	5X1.5	5X1.5	Sección de cable* ⊕ ⊕ + calef. elec	*Cable section** ⊕ ⊕ + elecheating*

TIPO D'APPARECCHIO		PXD 9	PXD 12	PXD 15	PXD 18	PXD 24	PXD 30	TIPO DE APARATO	*TYPE OF APPLIANCE*
3 N ~ 400 V - 50 Hz				*	*	*	*	3 N ~ 400 V - 50 Hz	*3 N ~ 400 V - 50 Hz*
FREDDO + VENTILAZIONE DEL RISCALDAMENTO TERMO.								FRIO + VENTIL o CALEFACCION TERMO.	*COOLING+VENTILATION OR THERMO HEATING*
Intensità nominale	A			3.8	5.4	6	6.5	Intensidad nominal	*Nominal current*
Intensità massimale	A			4.2	5.9	7.5	8.7	Intensidad maxima	*Maximum current*
Calibro fusibile aM	A			6	6	16	16	Calibre fusible aM	*Fuse rating aM*
Calibro fusibile ASE/VDE*	A			6	6	16	16	Calibre fusible ASE/VDE*	*Fuse rating ASE/VDE**
Sezione di cavo alim.*	mm^2			5X1.5	5X1.5	5X1.5	5X1.5	Sección de cable alim.*	*Power supply cable**
Collegamenti PXD / GC								Conexiones PXD / GC	*Linking pipes PXD / GC*
Sezione di cavo* ⊕ ⊕	mm^2			6X1.5	6X1.5	6X1.5	6X1.5	Sección de cable* ⊕ ⊕	*Cable section** ⊕ ⊕
MODO DESUMIDIFCAZIONE (FREDDO + VENTILAZIONE + RISCALD. ELETTRICO) OU Riscald.Thermo + Riscald.Elet.								MODO DESHUMIDIFICACION (FRIO + VENTILACION + CALEFACCINO ELEC.) O Calor termo + Calor elec.	*DESHUMIDIFYING MODE (COOLING+VENTILATION + ELECTRIC HEATING) OR THERMO HEATING + ELECTRIC HEATING*
ntensità nominale	A			8.1	11.9	12.5	13	Intensidad nominal	*Nominal current*
Intensità massimale	A			9.4	13.8	15.4	16.6	Intensidad maxima	*Maximum current*
Calibro fusibile aM	A			10	16	16	20	Calibre fusible aM	*Fuse rating aM*
Calibro fusibile ASE/VDE*	A			10	16	16	20	Calibre fusible ASE/VDE*	*Fuse rating ASE/VDE**
Sezione di cavo alim.*	mm^2			5X1.5	5X1.5	5X1.5	5X1.5	Sección de cable alim.*	*power supply cable***
Collegamenti PXD / GC								Conexiones PXD / GC	*Linking pipes PXD / GC*
Sezione di cavo* ⊕ ⊕ +riscald. elec	mm^2			6X1.5	6X1.5	6X1.5	6X1.5	Sección de cable* ⊕ ⊕ + calef. elec	*Cable section** ⊕ ⊕ + elecheating*

IMPORTANTE

* Questi valori vengono dati a titolo indicativo, essi devono essere verificati e aggiustati in funzione delle norme in vigore: essi dipendono dall'installazione e della scelta dei conduttori.

IMPORTANTE:

* Estos valores figuran a título indicativo. Deben ser verificados y ajustados en función de las normas en vigor; dependen de la instalación y de los conductores utilizados.

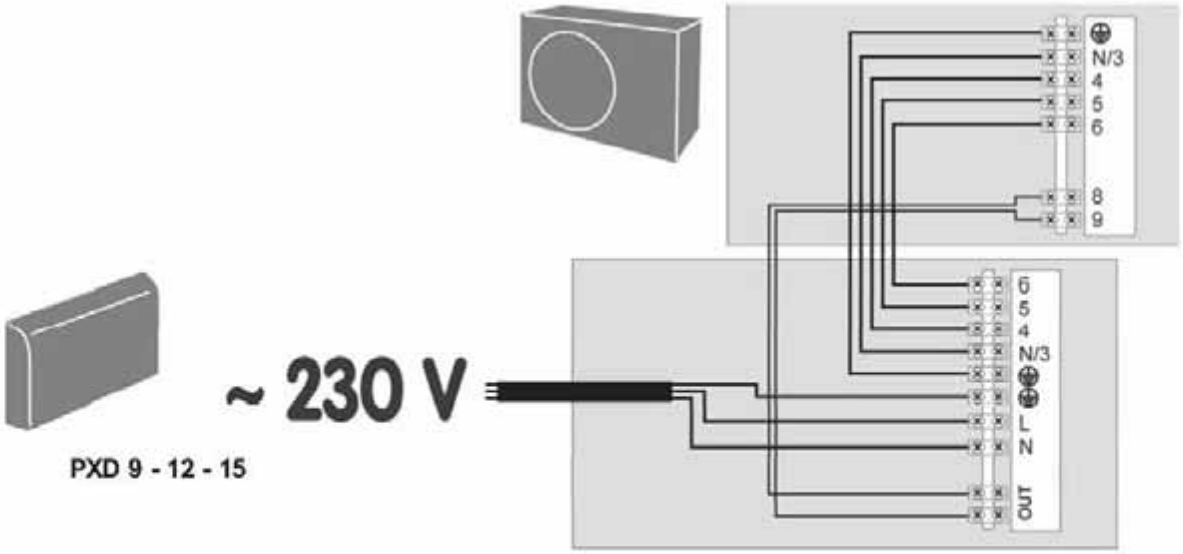
IMPORTANT

* *These values are given for guidance. They must be checked and adjusted according to prevailing standards. They depend on the system installed and the cables used.*

CONTENT

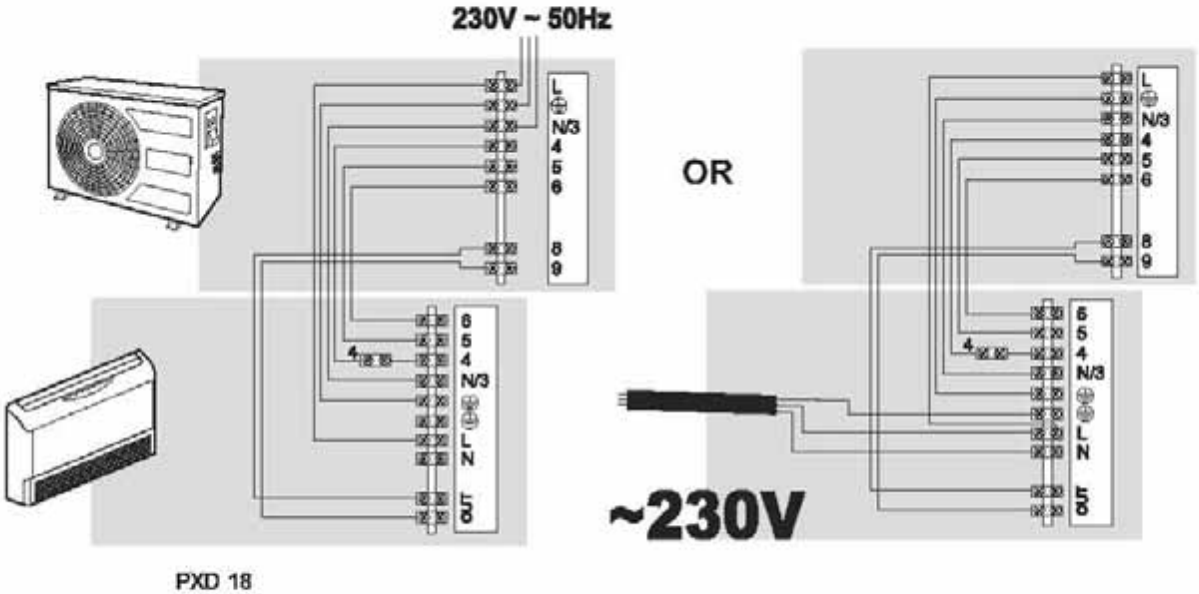
COLLEGAMENTIELETTRICI **CONEXIONES ELÉCTRICAS** ***ELECTRIC CONNECTIONS***

CON O SENZA RISCALDAMENTO ELETTRICO
CON O SIN CALEFACCIÓN ELÉCTRICA
WITH OR WITHOUT ELECTRIC HEATING



PXD 9 - 12 - 15

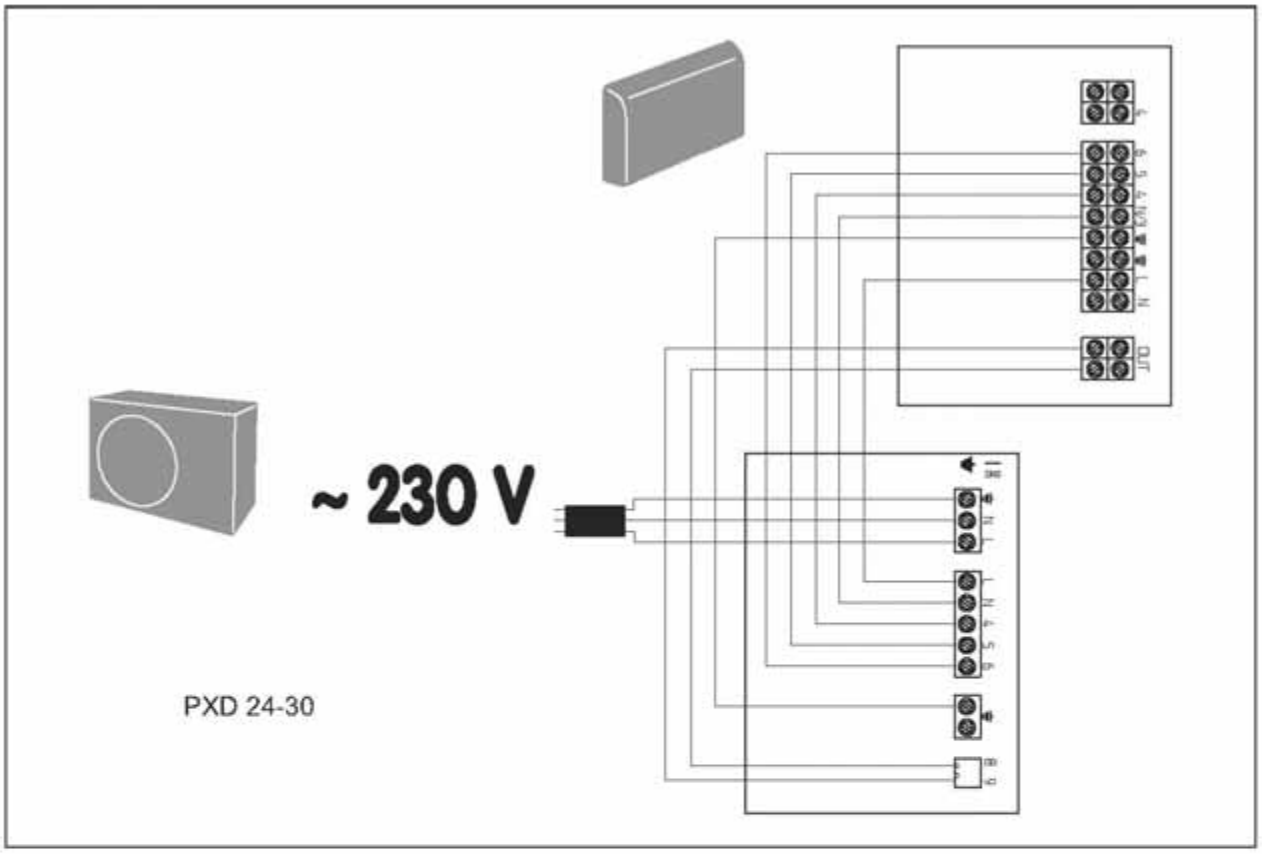
CON E SENZA RISCALDAMENTO ELETTRICO
CON E SIN CALEFACCIÓN ELÉCTRICA
WITH AND WITHOUT ELECTRIC HEATING



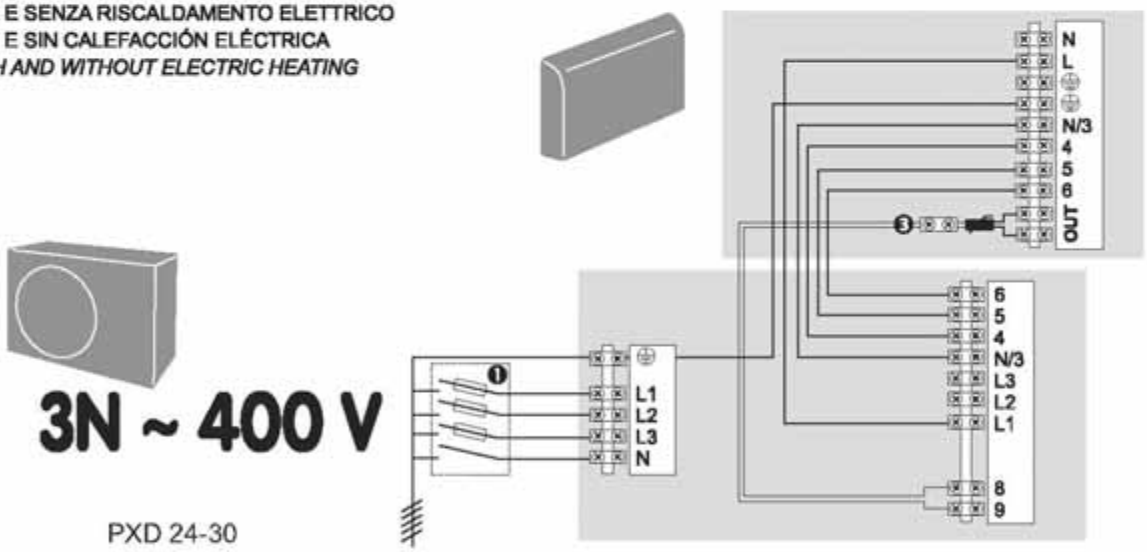
PXD 18

CONTENT

COLLEGAMENTIELETTRICI **CONEXIONES ELÉCTRICAS** ***ELECTRIC CONNECTIONS***



CON E SENZA RISCALDAMENTO ELETTRICO
CON E SIN CALEFACCIÓN ELÉCTRICA
WITH AND WITHOUT ELECTRIC HEATING



❶ Protezione obbligatoria NON fornita
❷ Collegare il filo di sonda su OUT dopo aver tolto la resistenza

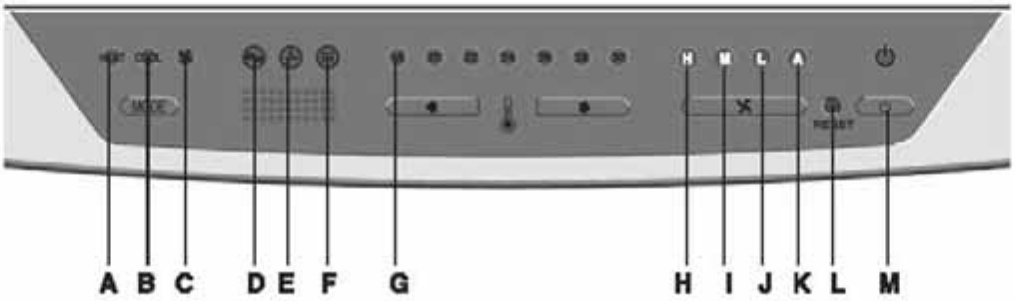
❶ Protección obligatoria NO incluida
❷ Conectar el hilo de sonda en OUT después de haber suprimido la resistencia.

❶ *Mandatory protection device NOT supplied*
❷ *Connect the sensor wire to OUT after removing the resistor*

SPIE E COMANDI DELL'APPARECCHIO

INDICADORES LUMINOSOS Y MANDOS DEL APARATO

INDICATOR LIGHTS AND CONTROLS ON THE UNIT



A)RISCALDAMENTO
Si accende durante il funzionamento. Riscalda e filtra l'aria del locale. Mantiene la temperatura ambiante desiderata.

B)FREDDO
Si accende durante il funzionamento. Rinfresca, deumidifica e filtra l'aria ambiente. Mantiene la temperatura ambiente desiderata.

C)VENTILAZIONE
Si accende durante il funzionamento. L'apparecchio funziona soltanto in modo ventilazione.

D)SOTTO TENSIONE
Si accende non appena l'apparecchio viene messo sotto tensione.

E)PROGRAMMAZIONE
Si accende durante il funzionamento. Lampeggia per annunciare che il segnale del telecomando è stato ricevuto e memorizzato.

F)FILTRO
Si accende quando il filtro ad aria deve essere pulito. Dopo la pulizia e il riposizionamento del filtro, il sistema deve essere reinizializzato (pulsante RESET).

G) TEMPERATURA
Visualizzata la temperatura impostata.

18 acceso	**= 18°C**
20 acceso	**= 20°C**
18 e 20 accesi	**= 19°C**

H)VENTLATORE
Velocità alta .H

I) VENTILATORE
Velocità media .M

J) VENTILATORE
Velocità ridotta .L

K)VENTILATORE
Ventilazione automatica .A

L)RESET
Premere per spegnere il pulsante arancio dopo avere rimontato i filtri puliti.

M) ON / OFF
Spia di accensione e di spegnimento dell'apparecchio.

A)CALEFACCIÓN
Se enciende durante el funcionamiento. Calienta y filtra el aire del local. Mantiene la temperatura ambiente deseada.

B) FRÍO
Se enciende durante el funcionamiento. Enfría, deshumidifica y filtra el aire ambiente. Mantiene la temperatura ambiente deseada.

C)VENTILACIÓN
Se enciende durante el funcionamiento. El aparato funciona únicamente en ventilación.

D)EN TENSIÓN
Se enciende desde la puesta en tensión.

E)PROGRAMACIÓN
Se enciende durante el funcionamiento. Parpadea para anunciar que se ha recibido y memorizado la señal del mando a distancia.

F)FILTRO
Se enciende cuando es necesario limpiar el filtro de aire. Después de la limpieza y colocación del filtro, hay que reiniciaIizar el sistema (botón RESET).

G)TEMPERATURA
Visualiza la temperatura de consigna.

18 encendido	= 18ºC
20 encendido	= 20ºC
18 y 20 encendidos	= 19ºC

H)VENTILADOR
Alta velocidad. H

I) VENTILADOR
Mediana velocidad. M

J)VENTILADOR
Baja velocidad. L

K)VENTILADOR
Ventilación automática. A

L)RESET
Pulsar para apagar el indicador luminoso naranja, después de colocar los filtros limpios.

M) ON / OFF
Indicador luminoso de funcionamiento y de parada del aparato

A) HEATING
Comes on during operation. Heating and filtration of the air in the room. Sustainment of required ambient temperature.

B) COOLING
Comes on during operation. Cooling, dehumidification and filtration of the air in the room. Sustainment of required ambient temperature.

C) VENTILATION
Comes on during operation. The unit is running in ventilation mode only.

D) POWER
Comes on as soon as the unit is energised.

E) PROGRAMMING
Comes on during operation. Flashes to indicate that the remote control signal has been received and stored in the memory.

F) FILTER
Comes on when the air filter needs to be cleaned. After cleaning and re-installation of the filter, the system must be reset (RESET button).

G) TEMPERATURE
Displays the set temperature

18 lit	***= 18 °C***
20 lit	***= 20 °C***
18 & 20 lit	***= 19 °C***

H) FAN
High speed. ***H***

I) FAN
Medium speed. ***M***

J) FAN
Low speed. ***L***

K) FAN
Automatic. ***A***

L) RESET
Press to switch off the indicator light and activate the filter function, after cleaning and re-installing the filter. Press to cancel the audible warning.

M) ON/OFF
Unit On/Off indicator light.

CONTENT

FILTRO ELETTROSTATICO

- Un filtro elettrostatico, nonché il suo supporto vengono forniti con l'apparecchio (accessori).
- Onde ottimizzare la filtrazione dell'aria, il filtro in questione può essere posizionato come segue.

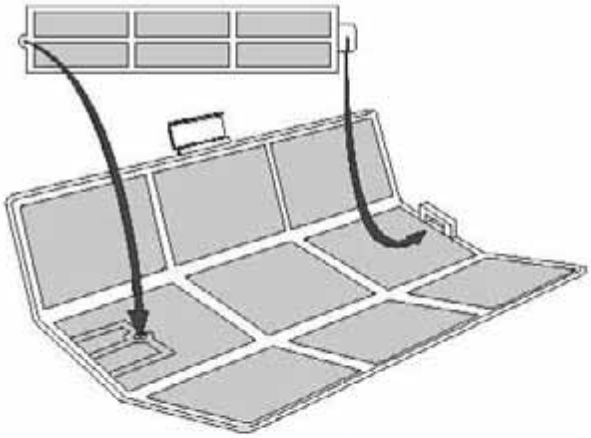
FILTRO ELECTROSTÁTICO

- Con el equipo se suministran como accesorios un filtro electrostático y un soporte.
- Para optimizar la filtración del aire, puede instalarlo de la siguiente forma.

ACTIVE CHARCOAL FILTER

- *An active charcoal filter and its support are supplied as accessories with your product. (1 per filter)*
- *In order to optimise air filtration, you can install it as follows.*

Accesso al filtro
Acceso al filtro
Filter access



MANUTENZIONE E RIPARAZIONE

PRIMA DI ESEGUIRE LE OPERAZIONI DI MANUTENZIONE, VERIFICARE CHE IL CLIMATIZZATORE SIA FUORI TENSIONE.

Pulizia del filtro ad aria
- Il vostro condizionatore è dotato di una spia di controllo del filtro ad aria. Quando questa spia F si accende, il filtro deve essere pulito.
- Per rimuovere il filtro, tirare in avanti la griglia di aspirazione, spingere leggermente i filtri verso il basso per aprirli.
- Reinizializzare l'apparecchio premendo il tasto Reset. La spia di controllo del filtro F si spegne.

NON FARE FUNZIONARE IL CONDIZIONATORE SENZA FILTRO!

Pulizia del condizionatore
- Strofinare l'unità interna con un panno morbido e asciutto o pulirlo con un aspirapolvere.
- Non utilizzare acqua calda o prodotti detergenti volatili che potrebbero danneggiare il frontale del condizionatore.

Precauzioni da prendere all'inizio della stagione
- Verificare che non vi sia alcun ostacolo al flusso di aria aspirata ed immessa sulle due unità interna ed esterna.
- Verificare che il condizionatore sia correttamente collegato.

Protezione del sistema elettronico
- L'unità interna e il telecomando non devono essere situati a meno di un metro di un televisore, di una radio o di qualsiasi altro elettrodomestico onde evitare le interferenze.
- Proteggere l'unità interna contro i raggi del sole.

Sostituzione delle pile del telecomando
- Togliere le pile del telecomando a partire della botola posteriore.
- Utilizzare due pile da 1,5 di tipo **AAA**.
- Le pile usate devono essere riciclate.

MANTENIMIENTO Y REPARACIÓN

ANTES DE INICIAR LAS OPERACIONES DE MANTENIMIENTO, COMPROBAR QUE EL CLIMATIZADOR ESTÁ DESCONECTADO.

Limpieza del filtro de aire

El climatizador está equipado con un indicador luminoso de control del filtro de aire. Cuando este indicador luminoso F se enciende, puede limpiarse el filtro.
- Para retirar el filtro, tirar hacia delante de la rejilla de aspiración y empujar los filtros ligeramente hacia abajo para desbloquearlos.
- Reinicializar el aparato pulsando la tecla Reset. El indicador luminoso de control del filtro F se apaga.

NO PONER EN FUNCIONAMIENTO EL CLIMATIZADOR SIN FILTRO!

Limpieza del climatizador
- Frotar la unidad interior con un trapo suave y seco, o limpiarla con un aspirador.
- No utilizar agua caliente o detergentes volátiles que puedan deteriorar el frontal del climatizador.

Precauciones que hay que tomar al principio de la temporada
- Verificar que no hay ningún obstáculo para el flujo de aire aspirado e impulsado, en las dos unidades interior y exterior.
- Cerciorarse de que el climatizador está conectado correctamente.

Protección del sistema electrónico
- La unidad interior y el mando a distancia no deben estar situados a menos de un metro de un televisor, una radio o cualquier otro electrodoméstico, para evitar interferencias.
- Proteger la unidad interior de los rayos solares.

Cambio de las pilas del mando a distancia
- Retirar las pilas del mando a distancia por la trampilla trasera.
- Utilizar dos pilas de 1,5 V de tipo **AAA**.
- Las pilas gastadas deben recycled.

MAINTENANCE AND REPAIR

BEFORE UNDERTAKING MAINTENANCE OPERATIONS, MAKE SURE THAT THE AIR CONDITIONER IS DISCONNECTED FROM THE MAINS.

Cleaning of air filter

Your air conditioner has an air filter clogging indicator light. When this indicator light F comes on, the filter must be cleaned.
- *To remove the filter, pull the inlet grid forward and press the filters slightly downwards to unclip them.*
- *Reset the unit by pressing the Reset button. The filter indicator light F goes out.*

Do not operate the air conditioner without the filter !

Cleaning of the air conditioner
- *Rub the inside of the unit with a soft, dry cloth.*
- *Do not use hot water or volatile detergents, which could damage the face of the air conditioner.*

Precautions to be taken
- *Check that there are no obstacles preventing the flow of inlet air and pulsed air, on both the indoor and outdoor units.*
- *Check that the air conditioner is correctly connected.*

Protection of the electronic system
- *The indoor unit and the remote control must not be located less than one metre from a television set, a radio or any other electrical appliance, in order to avoid interference.*
- *Protect the unit against direct sunlight.*

Replacement of the remote control batteries
- *Remove the batteries from the remote control unit via the rear flap.*
- *Fit two new 1.5 V type AAA dry cell batteries.*
- *Used batteries must be recycled.*

CONTENT

MANUTENZIONE

Manutenzione periodica
- Per ottenere un corretto funzionamento dell'installazione, è necessario procedere a una manutenzione preventiva delle unità interna ed esterna da personale qualificato.

Impianto generale
- Eseguire un'ispezione visiva dell'insieme dell'impianto in funzione.
- Verificare la pulizia dell'impianto in generale e verificare che gli scarichi delle condense non siano otturati, in particolare quello dell'unità interna, prima della stagione estiva.
- Verificare lo stato del recipiente.

UNITÀ ESTERNA

Circuito frigorifero
- Pulire lo scambiatore ad aria mediante un prodotto speciale per le batterie alluminio-rame e risciacquare con acqua. Non utilizzare acqua calda né vapore. Ciò potrebbe provocare un aumento della pressione del refrigerante.
- Verificare che la superficie delle alette in alluminio dello scambiatore non sia stata danneggiata da colpi o graffi, e se necessario, pulirla con l'apposito utensile.

Parte elettrica
- Verificare che il cavo di alimentazione generale non presenti alterazioni che potrebbero danneggiare il dispositivo di isolamento.
- Verificare che i cavi di interconnessione situati tra le due unità non presentino alterazioni e siano correttamente collegati.
- Se necessario, procedere al serraggio degli stessi.
- Verificare il collegamento alla terra.

UNITÀ INTERNA

- Per un buon funzionamento dell'impianto, è indispensabile pulire regolarmente il filtro a aria situato a livello dell'aspirazione dell'unità interna. Si consiglia di sostituire il filtro regolarmente.
- Il filtro sporco provoca una riduzione della portata dell'aria attraverso la batteria dell'unità interna, il che riduce il rendimento dell'impianto e impedisce il buon raffreddamento del motore di ventilazione.
- Verificare lo stato di pulizia della batteria interna.

MANTENIMIENTO

Mantenimiento periódico
- Para estar seguro de que la instalación funciona correctamente, es necesario un mantenimiento preventivo en las unidades interior y exterior, realizado por personal cualificado.

Instalación general
- Efectuar una inspección visual del conjunto de la instalación en servicio.
- Comprobar la limpieza de la instalación en general, y cerciorarse de que las evacuaciones de condensados no están obstruidas, especialmente la de la unidad interior, antes del verano.
- Verificar el estado del depósito.

UNIDAD EXTERIOR

Circuito frigorífico
- Limpiar el intercambiador de aire utilizando un producto especial para las baterías de aluminio-cobre, y enjuagar con agua. No utilizar agua caliente ni vapor, ya que podrían provocar un aumento de la presión del refrigerante.
- Comprobar que la superficie de las aletas de aluminio del intercambiador no se ha deteriorado debido a golpes o arañazos y, si fuera necesario, limpiarlas con la herramienta adecuada.

Parte eléctrica
- Verificar que el cable de alimentación general no presenta alteraciones que puedan perjudicar el aislamiento.
- Comprobar que los cables de interconexión entre las dos unidades no presentan alteraciones y están correctamente conectados.
- Apretarlos, si fuera necesario.
- Verificar la conexión a tierra.

UNIDAD INTERIOR

- Para que la instalación funcione correctamente, es indispensable limpiar con regularidad el filtro de aire, situado al nivel de la aspiración de la unidad interior. Se recomienda cambiar el filtro regularmente.
- Un filtro sucio provoca una disminución del caudal de aire a través de la batería de la unidad interior, lo que reduce el rendimiento de la instalación y dificulta la refrigeración del motor de ventilación.
- Comprobar el estado de limpieza de la batería interior.

SERVICING

Routine servicing
- *To ensure the correct operation of the installation, it is necessary to have preventive maintenance of the indoor and outdoor units carried out by qualified personnel.*

General installation
- *Carry out a visual inspection of the complete installation in service.*
- *Check the general cleanness of the installation, and check that the condensate evacuations are not blocked, particularly on the indoor unit, before the summer season.*
- *Check the condition of the tray.*

OUTDOOR UNIT

Coolant system
- *Clean the heat exchanger using a special product for aluminium-copper heat exchangers, and rinse with water. Do not use hot water or steam, as this could cause the pressure of the coolant to increase.*
- *Check that the surface of the aluminium fins of the heat exchanger is not damaged by impacts or scratches, and clean with an appropriate tool if necessary.*

Electrical section
- *Check that the main power supply cable is not damaged or altered in such a way as to affect the insulation*
- *Check that the interconnecting cables between the two units are not damaged or altered, and that they are correctly connected.*
- *Check the earth connection.*

INDOOR UNIT

- *In order for the installation to operate correctly, it is essential to regularly clean the air filter located in the intake of the indoor unit.*
- *When clogged, the filter reduces the air flow through the heat exchanger of the indoor unit, which in turn reduces the efficiency of the installation and inhibits the cooling of the fan motor.*
- *Check the cleanness of the indoor heat exchanger.*

ATTENZIONE

PRIMA DI PROCEDERE A QUALSIASI MANIPOLAZIONE DEL MATERIALE, OCCORRE ASSICURARSI CHE L'ALIMENTAZIONE ELETTRICA SIA TOLTA ECHE NON ESISTI ALCUNA POSSIBILITÀ DI AVVIAMENTO IMPREVISTA.

ATENCIÓN:

ANTES DE EFECTUAR CUALQUIER MANIPULACIÓN EN EL EQUIPO, ES CONVENIENTE ASEGURARSE DE QUE SE HA CORTADO LA ALIMENTACIÓN ELÉCTRICA Y DE QUE NO EXISTE NINGUNA POSIBILIDAD DE PUESTA EN MARCHA INESPERADA.

CAUTION

BEFORE CARRYING OUT ANY OPERATION ON THE EQUIPMENT, CHECK THAT THE ELECTRICAL POWER SUPPLY IS SWITCHED OFF AND THAT IT CANNOT BE SWITCHED ON INADVERTENTLY.

CONTENT

REMOTE CONTROL

PROGRAMMING
AND OPERATING MANUAL

ENGLISH

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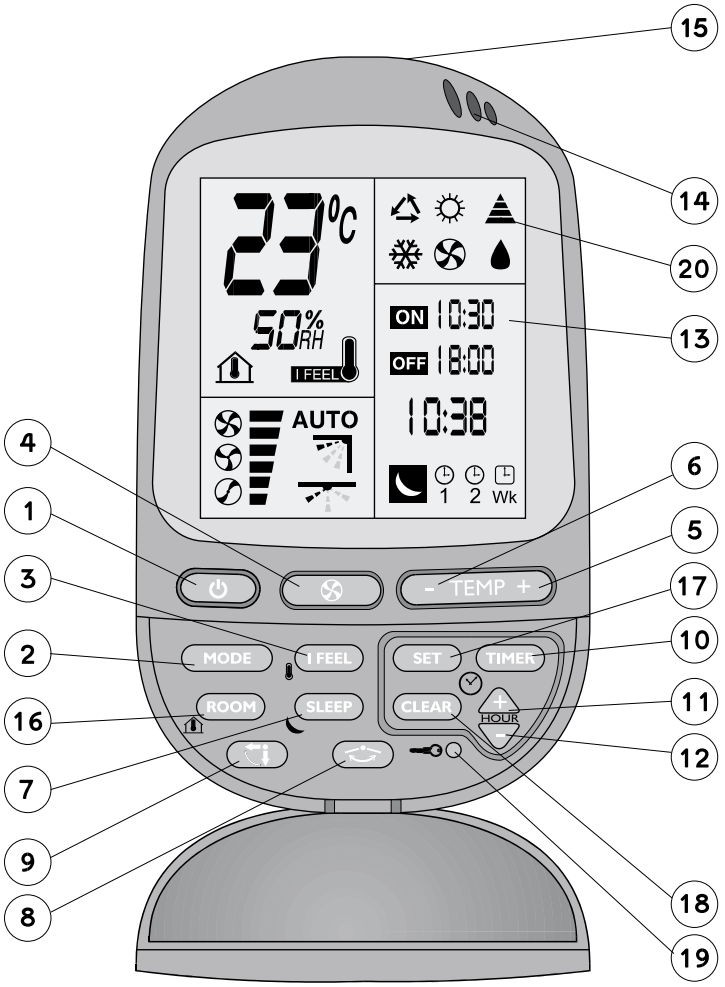
SE IL VOSTRO CONDIZIONATORE FUNZIONA PER IL SOLO RAFFREDDAMENTO, SIETE INVITATI AD IGNORARE LE ISTRUZIONI CHE SI RIFERISCONO ALL'USO DEL CONDIZIONATORE PER RISCALDAMENTO.

*LEGGERE ATTENTAMENTE QUESTE ISTRUZIONI **PRIMA** DI AVVIARE IL CONDIZIONATORE D'ARIA.*

CONTENT

REMOTE CONTROL



***Note**: Open the cover to reach the control buttons.*

1. *START/STOP button*
2. *Operation mode selection button*
   COOLING
   HEATING
   AUTO COOL / HEAT
   DRY
   FAN
3. *I FEEL temperature sensing mode button*
4. *FAN SPEED and AUTO FAN button*
5. *Room temperature UP button*
6. *Room temperature DOWN Button*
7. *SLEEP button*
8. *Airflow direction MANUAL positioning control button*
9. *Airflow direction AUTO-CONTROL button*
10. *TIMER button*
11. *TIMER UP button*
12. *TIMER DOWN button*
13. *LCD operation display*
14. *I FEEL sensor*
15. *Infrared signal transmitter*
16. *ROOM temperature button*
17. *TIMER SET button*
18. *TIMER CLEAR button*
19. *LOCK button*
20. *Transmission sign*

CONTENT

USE OF WIRELESS REMOTE CONTROL

WIRELESS REMOTE CONTROL PUTS ALL FUNCTIONS AT YOUR FINGERTIPS

- Aim at the infrared signal receiver on the room air conditioner when operating.
- The remote control signal can be received at a distance of up to about 8 m.
- Ensure that there are no obstructions between the remote control and the signal receptor.
- Do not drop or throw the remote control.
- Do not place the remote control in a location exposed to direct sunlight, or next to a heating unit, and/or other heat source.
- Do not expose the air conditioner signal receiver to a strong light such as fluorescent lamp or sunlight

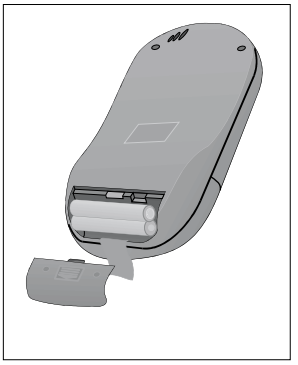
REMOTE CONTROL BATTERY CHANGE

- Remove the batteries from the remote control as shown.
- Use two 1.5 volt size AAA batteries
- For protecting the enviroment, please, return used batteries for recycling process.

PRIOR TO OPERATION

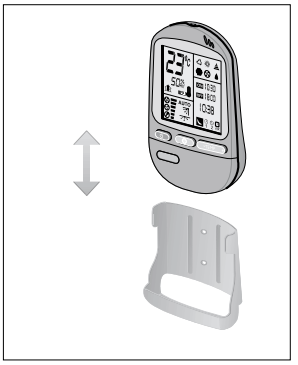
Prior to operating your air conditioner, make sure that:

- *The red tab protecting the remote control battery has been removed.*
- *For clock setting see page 11.*



REMOTE CONTROL HOLDER

Use the remote control holder when unit is not in use. Remote control can be slipped in or out its holder.



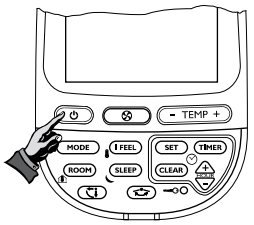
CONTENT

MODES OF OPERATION, FUNCTIONS AND FEATURES

COOL	Cools, dehumidifies and filters the room air. Maintains desired room temperature.
HEAT	Heats and filters the room air. Maintains desired room temperature.
AUTO	Automatically switches from COOLING to HEATING or from HEATING to COOLING, maintaining the desired temperature according to the room conditions.
DRY	Dehumidifies and softly cools the room In DRY Mode, the air conditioner operates at an increased dehumidifying power. This function is recommended to be used when temperature is rather low but the humidity is high.
FAN	Recirculates and filters the room air. Maintains constant air movement in the room.
AUTO FAN	The air conditioner automatically selects the FAN speed in accordance with the room temperature. At the start, the unit operates at high fan speed. As the room air approaches to the desired temperature, the fan switches to a lower speed for quieter operation.
I FEEL	Switches the temperature sensing point to the place where the remote control is located. (Generally the temperature sensor is located behind the intake grille of the air conditioner). This function is designed to provide a personalized environment by transmitting the temperature control command from the location next to you. The communication between the Remote Control and the unit is done by infra-red signal. Therefore, in using this function, the Remote Control should always be aimed, without obstructions, at the air conditioner.
TIMER	Real time control and display, automatically turns the air conditioner ON and OFF according to the time of day setting, ensuring comfort conditions before returning home, without wasting electricity. It turns the air conditioner off automatically when sleeping.
SLEEP	Designed to create comfortable sleeping conditions. When in COOLING mode, the temperature rises one degree centigrade after each consecutive hour, up to three hours, from the start of the mode. The temperature rise prevents the feeling of over-cooling while sleeping (when your body is at rest). In HEATING mode the reverse occurs; the air conditioner lowers its temperature one degree every hour. When in SLEEP mode, the air conditioner will be automatically turned off after seven hours. The result is a more comfortable and invigorating sleep, which leaves you feeling fresh and energetic in the morning.

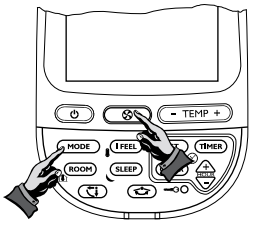
%RH HUMIDITY MEASURE-MENT (OPTIONAL)	Measures and displayes relative humidity between 30% and 90% at a temperature range of 15ºC to 45º C.
AUTO LOUVRE	The air louvre is automatically positioned for the most suitable blow-out angle, when COOL, HEAT, DRY or FAN modes are selected. When the air conditioner is turned off, the flap will close automatically for an aesthetic appearance.
VERTICAL AIR SWING	Automatic swing of supply air in vertical direction. The flap moves automatically in upward and downward direction to spread the conditioned air evenly throughout the room. **Note:** Applicable on some models only.
Option 1 **AIR DIRECTION POSITIONING**	Manual positioning of the air flap to provide desirable air flow angle. **Note:** Applicable on some models only.
Option 2 **HORIZONTAL AIR BLADES CONTROL**	Automatic swing and manual positioning of the air blades to provide required air flow angle in horizontal direction. The air blades move automatically from left to right direction, to diffuse the conditioned air evenly throughout the room.
ROOM TEMPERATURE	Measures and displays room temperature.
LOCK	Freezes the last operation setting on the remote control. When LOCK is activated, the remote control will not be able to control the air-conditioner.
ILLUMINATED KEYPAD AND LCD DISPLAY (OPTIONAL)	By pressing any button in dark environment, the keypad and the LCD display will be illuminated

OPERATION PROCEDURE



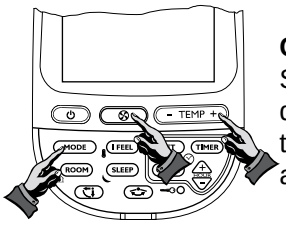
TURNING ON THE AIR CONDITIONER

Press START/STOP button (1) to turn the air conditioner on. The operation indicator on the air conditioner will light up, indicating that the unit is in operation. Note that the LCD operation display (13) will always show the last mode of operation and previous function used.
Follow the instructions if you choose to change the control settings; otherwise, the air conditioner will start and operate in the same mode and functions prior to being turned off.



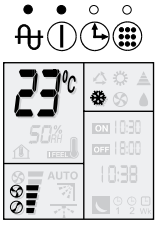
VENTILATING OPERATION

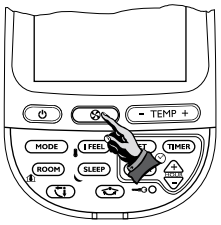
Select the ventilating mode by pressing MODE button (2). Switch to the desired fan speed by pressing FAN speed button (4).



COOLING OPERATION

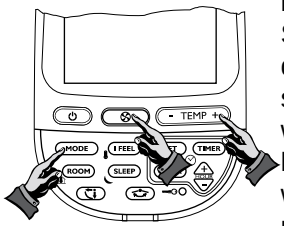
Select the COOLING mode by pressing MODE button (2). Switch to the desired FAN SPEED or to AUTO FAN by pressing button (4). Select suitable temperature setting. By selecting the COOLING mode, the air flap will move automatically to horizontal air delivery position, optimal for cooling.





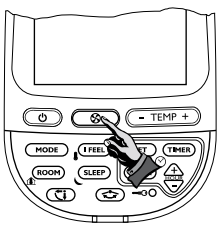
COOLING OPERATION WITH AUTO FAN MODE

This operation starts with the highest air flow in order to quickly lower the room temperature. It will then automatically switch to the low air flow to quietly maintain the selected temperature.



HEATING OPERATION

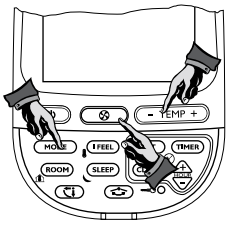
Select the HEATING mode by pressing MODE button (2). Switch to the desired FAN SPEED or to AUTO FAN by pressing FAN button (4). Select suitable temperature setting. By selecting the HEATING mode, the air flap will move automatically to vertical air delivery position, optimal for heating.The HOT KEEP function is provided. The fan will be turned off when the indoor coil temperature is not sufficiently hot to prevent uncomfortable cold air drafts. In some models the HOT KEEP function is operating in AUTO FAN mode only.



HEATING OPERATION WITH AUTO FAN MODE

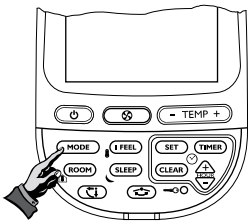
This operation starts with the highest air flow in order to quickly raise the room temperature. It will then automatically switch to a lower air flow to quietly maintain the selected temperature.

CONTENT



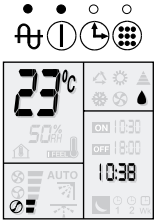
AUTO COOLING / HEATING OPERATION

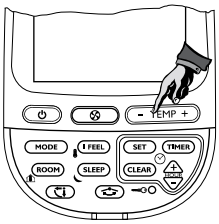
Select the AUTO mode by pressing MODE button (2). Switch to the desired FAN SPEED or to AUTO FAN by pressing button (4). Select suitable temperature setting. The air flap will automatically move to either horizontal air delivery for cooling or to vertical air delivery for heating. At start, the air conditioner will select its mode of operation according to the room temperature and the temperature setting.



DRY OPERATION

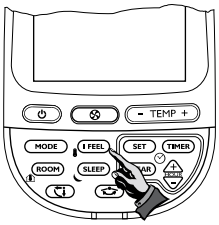
Select the DRY mode by pressing MODE button (2). Select the suitable temperature setting. While in DRY mode, the air conditioner will operate at low fan speed, regardless of the fan setting on the LCD operation display. Fan might terminate operation from time to time to prevent from over cooling. By selecting the mode, the air flap will move automatically to optimal horizontal air delivery position.





SELECTING THE TEMPERATURE

Press TEMP buttons (5) or (6) to change the temperature setting in the LCD operation display (13). The temperature setting is shown in degrees centigrade. A higher number indicates a higher room temperature. A lower number indicates a lower room temperature



I FEEL FUNCTION

Press I FEEL button (3) to activate the I FEEL function. Thermometer sign will appear on the LCD operation display (13). Select suitable temperature setting.

Make sure that the remote control unit is aimed at the air conditioner, with the I FEEL sensor (14) in front. Prevent the I FEEL sensor from being affected by heat sources such as lamps, heaters, direct sun, etc. or from being directly affected by the air conditioner air flow. These may cause the sensor to transmit the wrong temperature data, thereby disturbing the performance of the I FEEL function.

SLEEP FUNCTION

Press SLEEP button (7) to select the SLEEP function.

The sleep icon light while the sleep OFF time icon and the time which is 7 hours after current time blink as deafult. The default setting can be changed from 3 hr. to 12 hr. by pressing up and down buttons HOUR+ (11) and HOUR- (12) respectively.(The sleep timer will display the default time or the setting time plus the current time initially in the display).

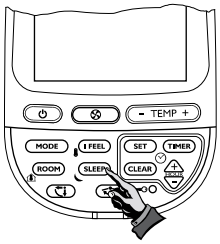
For example : currrent time is 23:00 and the sleep mode is set , the sleep mode OFF time will be 6:00 . If the sleep off time is set to 10 hr, then the sleep mode OFF time will be 9:00.All other timers will temporarily be suspended during the activation of the sleep timer.

The other timers will resume operation at the end of the SLEEP time.

To cancel the SLEEP function press one of the following:

- START / STOP button (1)
- SLEEP button (7)

NOTE: In some models the SLEEP icon lights only and the OFF time is set for seven hours as default.



TIMER OPERATION

There are four timers that can be selected on the remote control.Two daily timers (designated as T1,T2) ,and two optional weekend timers (designated as WKTI, WKT2) .Each timer can be selected by pressing TIMER button (10). To set each timer use time adjust up and down buttons Hour+ (11) and Hour- (12) respectively. SET button (17) to enable the timer and/or CLEAR button (18) to disable the timer.
Indicator (c) on the air conditioner will light up during timer operation.

NOTE: After a power, failure the timer operation is cancelled, timer indicator on the air conditioner will blink, the unit will be automatically turned to stand-by mode and STAND-BY indicator lights. To resume the timer operation, follow the instructions below.

A. DAILY TIMER

The daily timers T1 and T2 can be set for ON and OFF separately for two different time periods. Once the timer is set it will resume operation when initiated.

B. WEEKEND TIMER (OPTIONAL)

The weekend timers WKT1 and WKT2 can be set for ON and OFF separately
for two different time periods for two days only.
It will be effective on the day of setting and on the day after only.
At 24:00 on the second day, the WK timer will not be effective anymore and the daily timer will resume its effectiveness.

WKTI - effective on the setting day
WKT2 - effective one day after the setting day.

NOTE:
1. During the weekend timer operation, the daily timers will be disabled.
2. The WK timers must be reactivated before every weekend.

C. SELECTING A TIMER

Press the TIMER button (10) to select a timer. Each time the TIMER button (10) is pressed, one of the four following timer icons will appear on the LCD display.

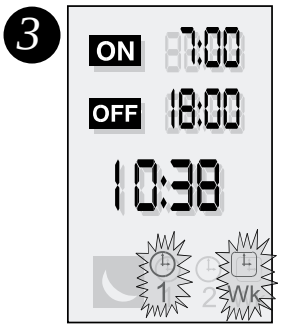
Press TIMER button to select daily timer T1.

Icon 1 of Timer T1 will blink

Press TIMER button to select daily timer T2.

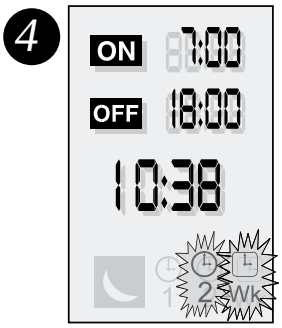
Icon 2 of Timer T2 will blink

Press TIMER button to select weekend timer WKT1



Icons 1 and WK will blink

Press TIMER button to select weekend timer WKT2



Icons 1 and WK will blink.

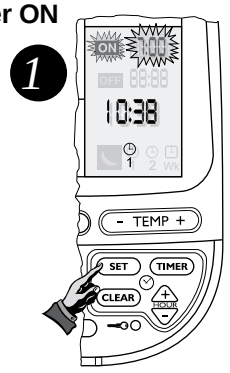
TIMER OPERATING MODES

SETTING THE ON TIMER

Undertake the following steps after selecting a timer - T1,T2 or WKT1, WKT2, to set a timer for the start time of operation.

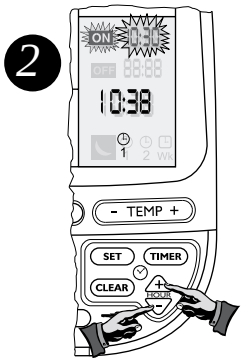
EXAMPLE: Turning the air conditioner ON at 10:30.

Press the SET. button.



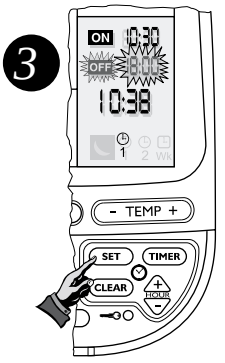
The ON icon & ON time digits will blink

Set the hours and minutes.



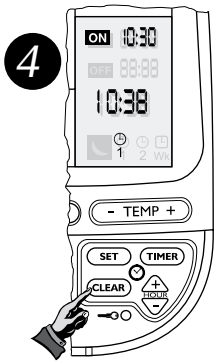
1.Set the ON time at 10:30 .
2.Press the (HOUR+) up button to advance the time, and press the (HOUR-) down button to retract.

Press the SET button



1. The ON time is activated at 10:30 (the time ON icon will light)
2. Time OFF icon & OFF time digits will blink.

Press the CLEAR button.



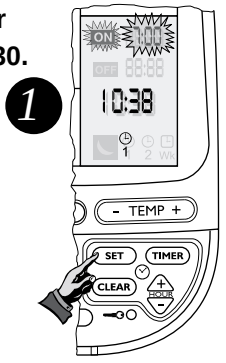
Timer OFF is cleared.

SETTING THE OFF TIMER

Undertake the following steps after selecting a timer - T1,T2 or WKT1, WKT2, to set a timer for the stop time of operation.

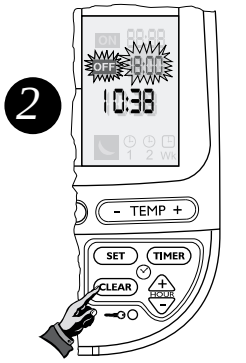
EXAMPLE: Turning the air conditioner OFF at 18:30.

Press the SET. button.



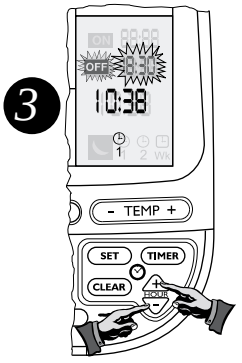
The ON icon & ON time digits will blink.

Press the CLEAR button.



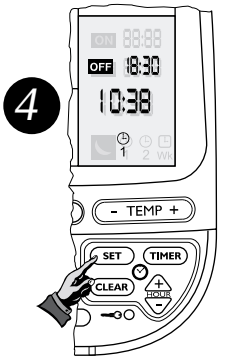
1. The ON time is cleared.
2. OFF time icon & OFF time digits will blink.

Set the hours and minutes.



1.Set the OFF time at 18:30 .
2.Press the (HOUR+) up button to advance the time, and press the (HOUR-) down button to retract

Press the SET button



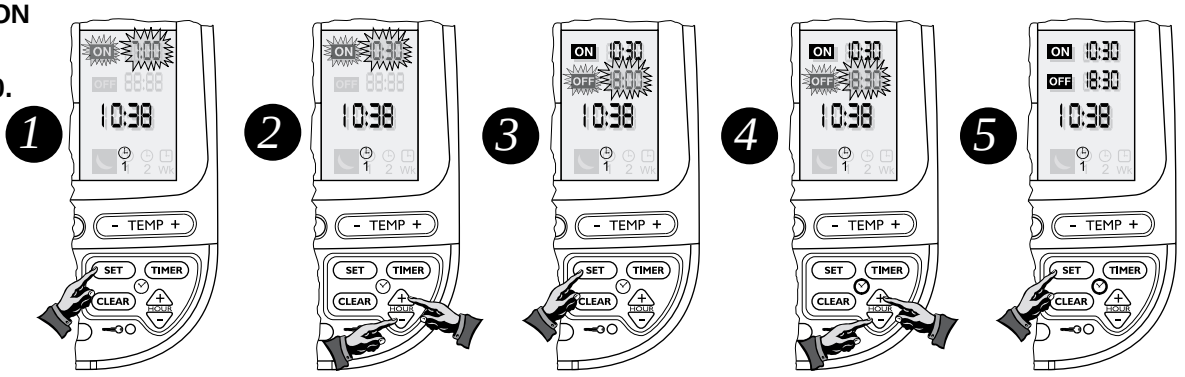
OFF time is activated at 18:30 (the (timer OFF icon will light)

NOTES:
1.The default setting for the timers are 7:00 and 18:00 for ON and OFF, respectively.
2. The timer mode will display always the last ON and OFF settings on the LCD display

SETTING THE ON AND OFF TIMERS

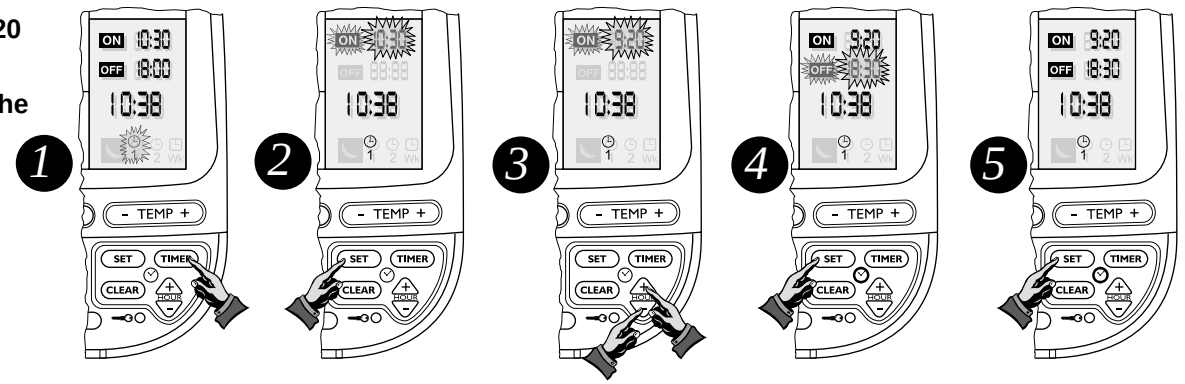
Undertake the following steps after selecting a timer - T1,T2 or WKT1, WKT2, to set a timer for the start and stop time of operation.

EXAMPLE: Turning the air conditioner ON at 10:30 and OFF at 18:30.

Press the SET button	*Set the hours and minutes.*	*Press the SET button*	*Set the hours and minutes.*	*Press the SET. button.*
				
The ON icon & ON time digits will blink.	*1. Set the ON time at 10:30. 2.Press the (HOUR+) up button to advance the time, and press the(HOUR-) down button retract.*	*1.The ON time is activated at 10:30 (the time ON icon will light) 2.Timer OFF icon & OFF time digits will blink.*	*1. Set the OFF time at 18:30. 2.Press the (HOUR+) up button to advance the time, and press the (HOUR-) down buttton retract.*	*OFF time is activated at 18:30 (the timer OFF icon will light)*

TO CHANGE THE TIME SETTING

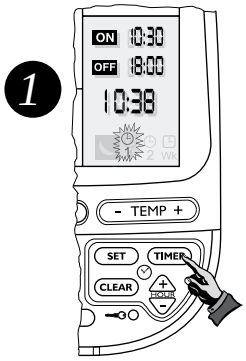
EXAMPLE: To change the ON time setting from 10:30 to 9:20 (while preserving the OFF time setting)

Press the TIMER button until the selected timer icon blinks.	*Press the SET button to enter edit mode*	*Change the setting time to 9:20 by pressing on HOUR-.*	*Press the SET button to save the new setting.*	*Press the SET button to confirm the previous timer OFF setting*
				
Note that the corresponding formerly set timer digits will display without blinking.	*ON icon & ON time digits blink*	*ON icon & ON time digits blink*	*ON icon & ON time digits light while OFF icon & OFF time digits blink.*	*ON & OFF icons and time digits of the consequent timer light*

TO CANCEL THE TIMER SETTING FOR A PARTICULAR TIMER

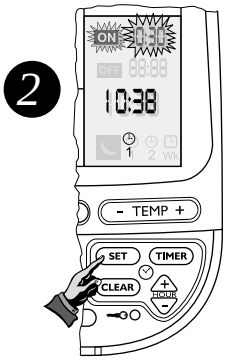
To cancel the ON time while keeping the OFF time setting.

Press TIMER button to select a timer.



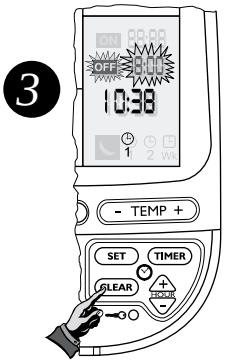
The selected timer icon blinks & the corresponding previous timer ON, OFF settings light.

Press SET button .



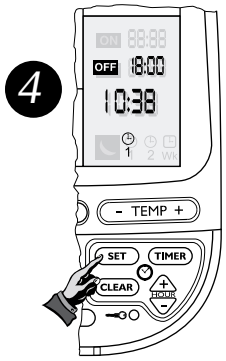
ON icon & ON time digits blink.

Press CLEAR button



ON time is cleared, OFF icon & OFF time digits blink.

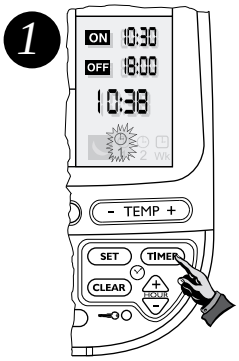
Press SET button



Confirm the new setting.

TO CANCEL THE ON & OFF TIME SETTINGS

Press TIMER button to select a timer.



The selected timer icon blinks & the corrensponding previous time ON, OFF settings light .

Press CLEAR button

All settings of the selected timer are cleared.

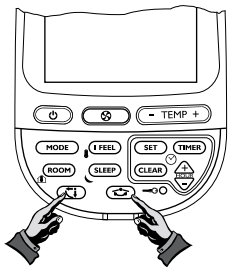
NOTES:

1 .The default settings for the timers are 7:00 and 18:00, for ON and OFF respectively.

2. The timer mode will always display the last ON and OFF settings on the LCD display.

3. Pressing CLEAR button (18) for 5 seconds will cancel all timer settings and clear timer display.

AIR DIRECTION OPERATION



1. Automatic Vertical Air Swing

Press button (9) to activate the auto air swing. Press button (9) again to deactivate this function

2. Air Direction Positioning (See Option 1 on page 2)

Press button (8) to position the air flap to any desired angle.

3. Horizontal air flow control (See Opion 2 on page 2)

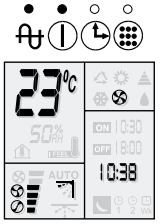
A. AUTOMATIC HORIZONTAL AIR SWING

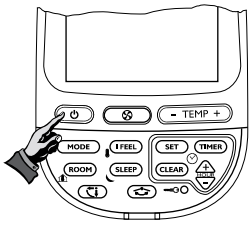
Press button (8) to activate the auto swing

The horizontal swing icon will light on the LCD display

B. MANUAL AIR DIRECTION POSITIONING

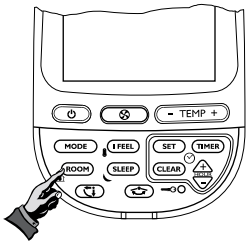
Press button (8) once again to position the air blades at any desired





TURNING OFF THE AIR CONDITIONER

Press START/STOP button (1) to turn off the air conditioner. Indicator (B) on the air conditioner will be turned off. Indicator (A) will stay lit, indicating that the air conditioner is in STAND-BY mode and ready to accept any new command from the remote control. The remote control LCD will display the clock time. The last operating set-up will be kept for the next operation.



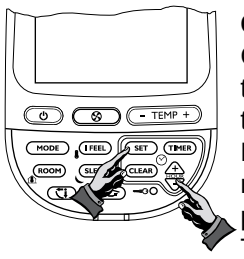
ROOM TEMPERATURE DISPLAY

By pressing on ROOM temperature, button (16), the measured room temperature and the room temperature sign will be displayed.

To cancel the ROOM Temperature display press on one of the following:

- Press again on ROOM temperature button (16).
- Change of MODE button (2)

NOTE: Room temperature range is between 0°C and 36°C in 1°C increments. Display should show "HI" or "LOW" to represent temperature that is above 36°C or below 2°C.

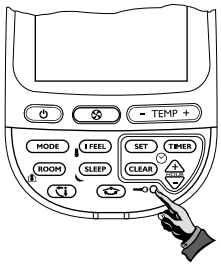


CURRENT CLOCK TIME SET

Clock setting is performed when batteries are inserted. The remote control displays the setting and the clock display will blink "0:00" or "12:00" AM (AM sign will blink, too) till a new time is set.

For clock setting, use buttons (11) and (12) for setting the hours and minutes, respectively, and then press timer SET button (17). The clock setting can be also performed by pressing timer SET button (17) for 5 seconds.

The clock display will blink, for new setting follow the steps described above.



LOCK FUNCTION

By pressing LOCK button (19), the remote control will lock the last operation program. All the function buttons will be inoperative, including START/STOP button. By pressing LOCK button (19) again the remote control will be released from its locked position. When lock mode is functioning, the transmission sign (20) will be on.